INTERIOR DEPARTMENT APPROPRIATIONS FOR 1952

THURSDAY, MAY 31, 1951

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 2 p. m., pursuant to recess, in room F–39, the Capitol, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Senators Hayden, O'Mahoney, Ellender, Cordon, and Chavez.

BUREAU OF RECLAMATION

CONSTRUCTION AND REHABILITATION

STATEMENT OF HON. HUBERT H. HUMPHREY, UNITED STATES SENATOR FROM THE STATE OF MINNESOTA

WESTERN MINNESOTA TRANSMISSION LINES

Senator HAYDEN. The committee will come to order. Senator Humphrey, you may proceed.

Senator HUMPHREY. Thank you very much, Mr. Chairman. I am sure that the subcommittee is fully informed as to the nature of the delegation that is before you. I have a justifiable pride in honestly being able to say today I have behind me some of the outstanding citizens of the State of Minnesota. There are a few representatives here from the State of Idaho.

I would not want to move into that jurisdiction, so I will speak only for the State of Minnesota.

Mr. Chairman, I have a prepared statement which I shall read.

MINNESOTA POWER SHORTAGE

The problem of getting adequate, reliable, and economical electrical power is a serious one in Minnesota and nearby farm States. It is of grave concern to thousands of rural families and is of considerable interest to all other users of power.

Although all consumers of power in the area are affected, the farmer is hit hardest. The tightness of the power supply is being felt now and will be felt more as farm labor moves into defense production and the Armed Forces.

May I say our State, like every farm State, is really feeling the effects of the movement of labor from the farm to the defense industries and, of course, the problem of the selective service and the recruitment of farm boys is an ever-present problem that has affected

our type of farming in particular? Ours is a diversified kind of farming, very heavy on the dairy-production side.

Farmers with the highest production goals in history and with labor in short supply are looking to electricity as a major substitute for their lost manpower.

The problem of tight power supply in the area is expected to be solved in 1954 or 1955 when the Bureau of Reclamation, through its Missouri Valley Basin power development, and its high-voltage transmission lines, can make an ample supply of hydropower available.

I digress here to point out that the area referred to is the Missouri River Basin area and the western portion of the State of Minnesota, which is noted on this map here. Here is our State line bordering upon South Dakota and bordering upon North Dakota and Iowa.

It is this portion that we consider, and the Government agencies that make these surveys consider, a part of the Missouri River Basin. It is that part that I refer to when I use the term area as it pertains to this testimony.

By 1954 and 1955 the Bureau of Reclamation intends to have lines in that area to conduct the Missouri Basin power generated at the dams from the hydrodams around the Missouri River at Fort Randall at Gavins Point, at Oahe and at Garrison Dam in North Dakota.

However, there is a critical period between now and that time. Power is urgently needed right now and especially it is needed by farmers.

SOURCE OF POWER, REA DISTRIBUTION SYSTEMS

At present, farmer-owned REA distribution systems get their wholesale power from two sources. First, commercial utilities and municipalities, and, second, from farmer-owned REA generating and transmission plants.

Since the Bureau of Reclamation plans to have Missouri River Valley hydropower available by 1954 or 1955, suppliers in the first classification have little incentive to increase capacity through the construction of new fuel burning plants.

In other words, the commercial utilities are looking forward to the time when they can buy power from Fort Randall and the Gavins Point Dam.

As a result, 16 REA distribution systems in Minnesota face the problem of how to meet present increased farm need for power in the critical period before Bureau of Reclamation power is introduced.

That is the sum and substance of our problem. What should they do? They are very much under the same difficulty that the private utility is, namely, to expand generation facilities at this time when they know the hydroelectric power will soon be available may be a very uneconomical investment.

These distribution systems, working with six farmer-owned and farmer-managed generating systems in Minnesota, Iowa, Wisconsin, and South Dakota, feel that they have developed a workable solution for the interim period. This involves the use of the standby capacity which the generating systems hold in reserve to assure dependable service to the distribution systems they serve.

Each separate power supply co-op has to have its own reserve. If all were in a single system, the total reserve needed would be much less than the total now installed by the separate system. The hitch

is that the six REA generating plants are not now connected by high voltage transmission lines.

That statement is self-explanatory, but to digress for a moment, these six REA generation plants each separately have some reserve power.

Senator CORDON. Would you locate those, Senator, and advise the committee as to the capacity of each of them?

Senator HUMPHREY. May I say there are men here from these particular generation plants. I would like to let them carry on in that part of the testimony because they know so much more of the details than I.

These six separate plants with all of their reserves find themselves at times with a reserve in one area much more than is needed, yet with a shortage of supply in another area, as will be pointed out.

Senator CORDON. Roughly, where are they located?

INTEGRATION OF SOUTH DAKOTA TRANSMISSION LINES

Senator HUMPHREY. In Minnesota, Iowa, South Dakota, and one of them, I guess, is over on the Wisconsin side.

You have the South Dakota system already integrated, or in the process of integration.

Those blue lines on the map show that. The North Dakota system, likewise has had some integration. We are talking about the red lines area, which are the proposed lines for the Bureau of Reclamation. We want them to be constructed soon enough to afford an opportunity for a high transmission line to integrate the reserve power systems.

Senator CORDON. Those red lines represent only the high power transmission or what is sometimes termed "backbone" transmission lines?

Senator HUMPHREY. I think that would be an appropriate term. That is correct.

If they were so connected it would be possible to develop a power pool which would move reserve power to the point where it is needed. It would put some of this stand-by power to work to meet everyday needs.

The value of such a network of high voltage transmission lines is shown by the fact that all of these six generating systems will become users of Bureau of Reclamation power as soon as it is available. The Bureau already has plans to build such a network, but construction is scheduled for a few years ahead.

AMOUNT REQUESTED, CONSTRUCTION OF TRANSMISSION LINES

To avoid a 4-year power drought in a richly productive farm area, rural people through their spokesmen have asked that Congress start to do now what it would otherwise be doing 4 years from now, namely, to appropriate to the Bureau of Reclamation the sum of $7 million so that construction may be started at once on the high voltage transmission network and its substations.

Let me point out that figure because it needs to be clearly understood. We are not asking for billions; we are asking for 7 millions which would be, in substance, money made available now to get transmission lines ready that will be needed to conduct the hydro power that will be available by 1954–55.

Eventually the Bureau will build 1,050 miles of line and its total estimated cost is set at $28 million.

Getting this work under way this fiscal year will make the REA power pool a reality and give farmers the assurance that they will have power in the period ahead and more power when the Bureau introduces hydro.

You will recall that under Federal law, the rural distribution systems are the preferred customers of the Bureau of Reclamation and that it is our policy to see that their needs are not overlooked.

RURAL TRANSMISSION LINE PROGRAM

The plan which Minnesota and Iowa farmers have presented to solve their problem also makes allowance for the establishmen, of their own low-voltage transmission systems to supply the needs of the 16 Minnesota rural systems. The Rural Electrificaiion Administration has given its approval to this plan and is prepared to make a loan of $11 million so that the farm power needs may be met.

Once the Bureau of Reclamation high-voltage transmission project gets under way, we will have done these things:

1. Released 60,000 to 70,000 kilowatts of generating capacity which the rural systems now have in reserve and which can be moved to the points where it is needed.

I want to emphasize that generation productivity is there. It is merely a mat.er of tying it up together on a transmission system so that it can be properly moved.

2. Relieved the pressure for power on commercial utilities and municipalities now serving the rural distribution systems.

3. Develop a high voltage transmission network which can be put to use now and to continued use as soon as the Missouri River hydroelectric power is made available.

4. Solve the immediate power problem and permit farmers to make productive use of electricity for food production, and

5. Do all this in a businesslike way since the wheeling charges which the rural systems will pay for use of the Bureau lines will start sooner than was anticipated.

In other words, the REA systems here would pay a wheeling charge to the Bureau of Reclamation for the use of these lines. At such time the Bureau of Reclamation produces the hydro, then those lines would be used by the Bureau of Reclamation.

The wise and careful planning which has gone into this proposal should not pass unnoticed. REA members and officers through progressive management planning, have developed a soundly engineered and businesslike solution to their power problem which takes into consideration the needs of all consumers of power, the Government's security and recovery of funds, and the immediate farm needs.

This is an investment in productive capacity. The benefits which will arise out of it are so clear and compelling as to make us seem derelict in meeting our obligations if we fail to act.

In the light of these facts, I ask support that $7 million be appropriated this year to the Bureau of Reclamation so that transmission line construction may be hastened and farm needs met.

Mr. Chairman, at this point I would like to insert in the record some telegrams and communications I have received in regard to this matter.

Senator HAYDEN. They will be inserted.
(The material referred to is as follows:)

JACKSON, MINN., *May 30, 1951.*

Senator HUBERT H. HUMPHREY,
Senate Office Building, Washington, D. C.:

Deeply regret unable to attend REA representatives hearing May 31 on transmission line question. We are very concerned over this matter and urge for favorable consideration so that low cost abundant power can be made available to this area.

GEO. COMSTOCK,
President, Federated Rural Electric Association.

MANKATO, MINN., *May 31, 1951.*

Hon. Senator HUMPHREY,
Senate Office Building:

Flood damages to our office and my home do not permit me to be at the hearing today. We are 100 percent for advance construction of Bureau lines in Minnesota. We definitely request favorable action.

C. L. PALMERSTON,
Manager, Blue Earth Nicollet Co-op Electric Association, Mankato, Minn.

PATERSON, N. J., *May 31, 1951.*

Senator H. H. HUMPHREY,
Senate Office Building:

Physical incapacity requires I postpone my appearance before your committee for a few days. Will be available at your call after Tuesday, June 5.

DAVID L. COLE.

OWATONNA, MINN., *May 28, 1951.*

Hon. HUBERT HUMPHREY,
United States Senate, Washington, D. C.:

Unable to have delegate in attendance Senate Subcommittee Interior Appropriations hearing May 31, June 1, 1951. Urge utmost support of this vital legislation.

STEELE WASECA CO-OP ELECTRIC.

DANUBE, MINN., *May 29, 1951.*

Hon. H. H. HUMPHREY,
United States Senate:

We request that you aid in every way possible in restoration of funds to budget on Interior appropriation.

RENVILLE SIBLEY CO-OP POWER ASSOCIATION.

HURON, S. DAK., *May 26, 1951.*

SENATOR HUBERT HUMPHREY:

The directors of this association representing 1,800 farmers wish you to vote no on Taber and Keating amendments as they represent a direct hindrance to farm operations in this area. The project has been notified by its power source that electric power will be curtailed from them after this fall, therefore, if appropriations are not made for the Bureau of Reclamation for construction of transmission lines and develop new sources, the farm production in this community will be greatly reduced.

C. W. Stitt, President, Richard Haadeg, Vice President, A. F. Reinschmidt, Treasurer, Virgil Gilbert, Secretary, Gerald Dyer, C. H. Fenner, L. T. Hill, Otto Kraft, Sam Tschetter.

TRAVERSE ELECTRIC COOPERATIVE, INC.,
Wheaton, Minn., May 14, 1951.

Senator HUBERT HUMPHREY,
United States Senate, Washington, D. C.

HONORABLE SENATOR: At a recent meeting of my board of directors, a resolution was passed instructing me to write our Senators relative to six crippling amendments that have been added to the Interior appropriations bill. These amendments, as we understand it, will reduce considerably appropriations for the Bureau of Reclamation, Bonneville Power Administration, Southwestern Power Administration, and Southeastern Power Administration.

Naturally we, in distributing power to farm families in this area, are vitally concerned in appropriations to the Bureau for work on the Missouri River. My board, therefore, by unanimous vote, requests that a substantial part of the reduction in construction funds, made by the House of Representatives, be reinstated in the Senate.

Thanking you for your attention in this matter, I remain,

Yours very truly,

LLOYD D. ZIMBRICK, *Manager.*

KANDIYOHI COOPERATIVE ELECTRIC POWER ASSOCIATION,
Willmar, Minn., May 23, 1951.

Hon. HUBERT H. HUMPHREY,
State Senator, State of Minnesota, National Capital,
Washington, D. C.

HONORABLE SIR: We thought that you would be interested in the expressions as set forth in the enclosed editorial of the West Central Minnesota Daily Tribune, which has a circulation of more than 8,000 in Minnesota.

Anything that you might be able to do to support this program, which means ever so much to the people of the State and Nation, will be greatly appreciated.

Cooperatively yours,

J. MAURITZ NELSON, *Manager.*

ALONG THE WAY

By O. B. M.

The big power interests are staging a battle to curb Federal power projects.

The public doesn't realize what a fight is going on but the war is raging in Congress just now.

So many times Johnny Q. Citizen pays little note to these battles and only becomes conscious of what has occurred later on when he pays the bill. Too late.

The Government goes ahead and builds dams to provide power for certain areas—cheap water power. So far so good—there is not too much criticism there.

But when it comes to the building of transmission lines to bring this cheap power to outlying districts—here comes the fight.

The Fair Deal Government is partial to public-owned and co-op power projects and efforts are being made to have Federal construction of transmission lines to serve these projects.

Against such proposals we find the power trusts arrayed and they hope to stop all such building of lines with the old cry of "socialism."

But even if they succeed there is no assurance that they themselves will build any lines of their own accord—they are merely out of stop the Government from doing the job.

In other words—like the matter of rural electricity—they yelled against the REA but when they had the field to themselves—they did nothing to provide such service.

They would like to have the field for themselves and then stand pat and forget the crying demand for more power needed in town and country.

There are some things in our economy—like power—which is very vital to every family and which should be provided at the lowest possible cost.

We believe in free enterprise, in business generally, but when it comes to power there is monopoly and public trust involved and that's a different story.

We hope the Government will win out in this battle against the power trusts as it will be a victory for the people.

McLeod Cooperative Power Association,
Glencoe, Minn., May 25, 1951.

Senator Hubert Humphrey,
Senate Chambers, Washington, D. C.

Dear Senator Humphrey: The Senate is now or soon will be considering appropriations for the Department of the Interior, Bureau of Reclamation. This association is vitally interested in one aspect of this problem.

We know that electrical energy to be generated in the Missouri Valley will be offered for sale to us at very attractive rates. We must obtain such energy when it is available.

This energy must be transmitted to us. A dispute is apparently arising as to the method of transmission. Some want it done by Federal lines alone and some by lines owned by present utilities. This association, through its board of directors, proposes that both methods be used.

We want the Bureau of Reclamation to deliver the energy over the transmission lines to be constructed to 4 or 5 convenient points in Minnesota. From there we would like to see existing utilities complete the delivery to ourselves and other customers.

This program will not be possible under the provisions of the law as proposed by the House of Representatives. There this appropriation bill has had added to it an amendment which would prohibit any Federal construction within any area where there exists a contract for the delivery of this Federal energy over existing utility facilities. This is the so-called Keating amendment to H. R. 3790, which we consider to be dangerous to the electric co-ops of Minnesota.

If this provision is written into the law, then we cannot recommend that the Bureau of Reclamation enter into any wheeling contracts for Minnesota. If such contracts were to come into existence, it would then be impossible for the Bureau to build any stub lines into the State.

The construction of Federal stub transmission lines into Minnesota seems to be absolutely required. If satisfactory wheeling contracts cannot be made or kept in existence, or if the present utility were to become inadequate in the future, the co-ops could construct their own facilities. If the delivery point of power is too far removed we could never help ourselves in this situation.

We, therefore, ask your active support to keep the Keating amendment or any similar broad provision out of the law. We see in it a great danger to our ability to best serve our members.

Yours very truly,

R. A. Fischer, *Manager.*

Central Minnesota Cooperative Power Association,
Springfield, Minn., May 9, 1951.

Hon. Hubert Humphrey,
United States Senator, Senate Office Building,
Washington, D. C.

My Dear Senator Humphrey: The board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., met last night and discussed the effect of the recent action by the House of Representatives in cutting down the appropriations for the Department of Interior demands for sufficient funds so that the transmission lines in the Missouri Valley may be built and REA current furnished to our cooperative and to 13 or 14 other Minnesota cooperatives who are in the same position.

The action taken by the House of Representatives in the opinion of my board of directors is unfair, unsound, and a backward step in the progress of REA construction work, and is also a slap in the face of the farmer who needs this electricity to generate more power and produce more food. Help on the farm has now been drafted away and unless REA current is furnished quickly, and in a sufficient quantity to produce food, this Nation will suffer great harm and many farmers will be compelled to quit farming or reduce production.

The board went on record as asking me to transmit this letter to you asking that you take prompt steps to reinstate these appropriations which have now been cut down so that the people in western Minnesota and eastern South Dakota may soon have the benefit of this cheap power.

Please advise me whether we may depend upon your support in behalf of this needed cause.

Awaiting to hear from you, I am

Sincerely yours,

Alexander G. Stefen,
Attorney for Association.

CENTRAL MINNESOTA CO-OPERATIVE POWER ASSOCIATION,
Springfield, Minn., May 25, 1951.

Hon. HUBERT H. HUMPHREY,
United States Senator,
Senate Office Building; Washington, D. C.

DEAR SENATOR HUMPHREY: Enclosed please find a resolution passed by the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., regarding the cut made by the House concerning funds for the Department of Interior and Bureau of Reclamation, concerning the building of transmission lines for REA current and REA Cooperatives.

My board of directors, including the boards of 16 other cooperatives, are greatly concerned about having this money restored and reinstated so that southwestern Minnesota and eastern South Dakota can get the benefit of this cheap power.

If you ever want to do something for the benefit of the farmers in production on the farm, then please use your best efforts to see that these funds are restored to the respective bills.

Several members of the board and myself may call upon you in person within the next few days concerning this matter, but if not then this letter will serve the purpose.

Thanking you for giving this your prompt and personal attention, I am

Sincerely yours,

ABEL SEIFERT, *Attorney for Association.*

RESOLUTION ADOPTED BY BOARD OF DIRECTORS OF CENTRAL MINNESOTA CO-OPERATIVE POWER ASSOCIATION OF REDWOOD COUNTY, MINN. (60), PROTESTING REDUCTION OF APPROPRIATIONS TO DEPARTMENT OF THE INTERIOR PROGRAM FOR MARKETING AGENCIES FOR TRANSMISSION LINES FOR TRANSPORTATION OF POWER FOR MISSOURI VALLEY PROJECT

Whereas information has come to the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., that on April 24, 1951, by action of the House of Representatives of the United States, in proceedings then pending before it, did drastically cut and reduce the request for appropriations made by the Department of the Interior and its marketing agencies, and did also drastically cut the request made by the Bureau of Reclamation for the erection and construction of transmission lines, for the Missouri River Valley project, and other projects then listed and up for consideration on said date;

And whereas the action by the House of Representatives so had and taken is highly detrimental to the REA program for securing cheap power, and such action will greatly hamper and forever bar the REA Administration from serving and completing its uncompleted lines of construction, and will stifle and prevent the REA Administration from procuring cheap power through the Bureau of Reclamation, in constructing, erecting and installing transmission lines for the transportation of power from its source, to the various load centers;

And whereas the action so taken by the House of Representatives is a direct slap in the face of the farmers living in the western and southwestern part of Minnesota and eastern part of South Dakota, and will prevent the members of the 16 REA cooperatives united in a group, to receive and use this extra power, if and when the same is available;

And whereas the action by the House of Representatives has the object of playing directly into the hands of the large private power companies, and denies the REA cooperatives and their members, from having access to said power, or the use thereof: and whereas, the various municipal utilities operating in the area covered by said 16 REA cooperatives, either do not want to furnish the necessary power needed by said REA cooperatives, or cannot furnish the necessary current, in order that the existing lines may be efficiently maintained and full and constant power may be available for the needs of its various consumers;

And whereas the cutting and reduction of said appropriations as above listed, will of necessity result in a reduction of farm crops and products, because of a reduction and loss of manpower in rural areas, and may seriously cripple and hamper the present rearmament program, and result in food shortage for the Armed Forces;

And whereas one of the most important and basic rules and regulations of the Bureau of Reclamation and Missouri Valley Authority, and other public power

authorities, is to the effect that REA cooperatives, farmers and cities located within and adjacent to the Missouri Valley Authority, shall first be entitled to and have access to said source of power before private public utilities can obtain access to said current; and whereas, the action of the House of Representatives has the effect of compelling, forcing and directing all REA cooperatives to seek, receive and purchase their power from private public utilities, and be their slaves for the next century, and at rates highly exorbitant, and gives an absolute monopoly to private public power companies, as against REA cooperatives and its consumers;

And whereas the action of the House of Representatives so taken as above set forth, is highly detrimental and against the best interests of the consumers of the 16 REA cooperatives of southwestern Minnesota, including the Central Minnesota Cooperative Power Association of Redwood County, Minn.: Now, therefore, be it

Resolved by the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., That it strongly condemns the action so taken by the House of Representatives in cutting and reducing the funds of the Department of the Interior and the Bureau of Reclamation, and thus prevent the erection and construction of transmission lines, for the transmission of power from the Missouri Valley, to areas in eastern South Dakota and western Minnesota, thereby directly playing into the hands of the private public power companies, and stabbing their REA cooperatives and their farmers in the back, and denying them access to this cheap source of power; and be it further

Resolved, That this board go on record as demanding from the Members of Congress, from the State of Minnesota, that they reverse their vote and stand on said matter, and restore the appropriations which now have been stricken from the various bills; if and when the same are acted upon by the United States Senate; and be it further

Resolved, That the United States Senate, and particularly the two Senators from the State of Minnesota, be urgently requested to demand that the funds stricken from the bill for the Department of the Interior and Bureau of Reclamation for the building, erection, and construction of transmission lines from the source of power of the Bureau agency in the Missouri Valley Basin, and other similar projects, be restored and replaced, so that the consumers of REA cooperatives may have access to this cheap source of power first, before the same is diverted to the benefit and use of the private public power companies; and be it further

Resolved, That a copy of this resolution be signed by the president and secretary of this cooperative, and sent to each Member of the House of Representatives from the State of Minnesota, and to the two United States Senators from the State of Minnesota, for their personal attention and answer.

Director Elmer Simon moved the adoption of the above resolution, and Director Anton Prokosch seconded the same. Upon a vote being taken, the same was unanimously adopted and carried.

Passed and adopted at a special meeting of the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., held this 8th day of May 1951.

L. B. FREDERICKSON,
President of said Association, Clements, Minn.

G. E. LUESCHER,
Secretary-Treasurer of said Association.

STATE OF MINNESOTA,
County of Redwood, ss:

I, G. E. Luescher, secretary-treasurer of the Central Minnesota Cooperative Power Association of Redwood County, Minn., do hereby certify that the foregoing is a true, correct, and complete copy of a resolution passed and adopted by the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., at a special meeting held on May 8, 1951, and of the whole thereof.

Dated at Clements, Minn., May 8, 1951.

[SEAL] G. E. LUESCHER,
Secretary-Treasurer of the Central Minnesota Cooperative Power Association of Redwood County Minn.

RURAL COOPERATIVE POWER ASSOCIATION,
Elk River, Minn., May 24, 1951.

Hon. HUBERT HUMPHREY,
United States Senate, Washington, D. C.

DEAR HONORABLE HUMPHREY: The Southwest Power Cooperative is comprised of 16 cooperatives in southwestern Minnesota, and involves almost the entire west half of Minnesota and nearly all of the section south of Minneapolis except a few counties on the southeast corner presently served by Dairyland Power Cooperative.

This group has had many power shortage problems in the last years which have been gaining in severity and importance. Statements of Edward Mackie, engineer for the Ellerbe Engineering Co., who are the designing engineers for the southwest Minnesota group, have since last May been attempting to work out power supply agreements with Northern States Power Co., Ottertail Power Cooperative, and Minnesota Power & Light Co. Their requests for discussions on this matter and statements by the companies have gone without answer, as Mr. Mackie's testimony on page 1433 of the subcommittee report will substantiate.

These 16 REA cooperatives' power problem is severely complicated by a question of economics. The private power companies in this area have been holding back from putting in the capacities they need because of the large amount of power that will be available from the Missouri Valley. The question of when or if Bureau construction will be made makes it impossible for the power users to plan a program in the future, and it possibly complicates the problem of power suppliers who may be reluctant to make any investments in building power plants which would soon be outdated and outmoded in approximately 1954 or 1955, when Missouri power with large unlimited quantities will be available.

The most economical solution to this problem was presented to the Subcommittee on Appropriations and is as follows in simple terms:

1. That the Bureau of Reclamation shall construct the lines as proposed on the enclosed map by the cost of approximately 25 million dollars, which lines would be leased by the 16 distribution cooperatives and 7 power cooperatives.

2. The pooled generating capacity of the above-named power cooperatives would thus be piped into the lines and would supply southwestern Minnesota until Bureau power became available in 1954 or 1955. About this time the power cooperatives' loads would be rising and they will withdraw serving power to this network, and Bureau power from Missouri Valley would flow into it.

3. The Southwest Minnesota Cooperative will install the 69-kilovolt distribution lines to their various substations to distribute the power off of the Bureau high line. Thus, under these conditions, Bureau lines will be built that will be absolutely necessary if any substantial portion of the Missouri Valley power is to be used and not left standing in the dams for want of transmitting facilities. The reserve capacities of the REA systems will be utilized, whereas now they are forced to stand idle in preparedness in case of plant unit failure. The last and final advantage is that many millions of dollars' worth of generation equipment will not have to be installed for a short life of only four or five years, as they will become obsolete and unnecessary when the many hundreds of thousands of kilowatts of Missouri Valley power are produced. The Bureau of Reclamation has stated that power in the South Dakota area will be available in late 1954.

This plan is one of complete compliance with the prudent use of critical materials important to the defense effort. The use of transmission-line materials is slight compared with the construction of power plants and their intricate equipment. Moreover, if this capacity of 60,000 kilowatts is not supplied by the above plan of integrating, the REA cooperatives must build new generating equipment. Delivery dates on this equipment due to the defense requirements has lengthened out considerably, until steam turbines of 15,000 kilowatts or greater require 3 years for delivery. It is easy to see that other methods than the above suggestion of taking care of the power requirements for this territory of Minnesota is almost impossible without utilizing the things that we have now, such as the reserve capacity in these REA power cooperatives.

Of great economical significance is the fact that these lines will be leased by their users, and thus the Federal Government will not bear the total expense of these lines before they are needed by the Bureau of Reclamation. Next of major importance is that the lines will be ready to carry out the energy of the Missouri Valley, which would be unusable and a large investment in generating equipment would go unused without the minor addition of the transmission facilities. Hundreds of millions of dollars are being invested in turbo-generator equipment at the dam power plants. Without transmission facilities, this investment will be worth-

less until such facilities of a large enough size and voltage are installed to properly distribute the tremendous large blocks of power that will be available.

The above description has emphasized the REA cooperatives necessities. It does not begin to touch the requirements of the municipalities in this area, who are both supplying their own energy and those who are experiencing difficulties in getting enough energy from private companies. The Bureau facilities and the REA facilities will be available to help distribute low-cost hydro power to the municipalities in this area.

Let us not overlook the fact that the proximity of this area to the Missouri River Basin and its low-cost hydro power makes the addition of thermo-generating capacity uneconomical, and that these power shortages will grow in safety due to the reluctance to install high-priced capacity that will be serviceable for such a short time.

I have been advised by Mr. Sabie that many representatives of these 16 cooperatives will arrive in Washington Monday morning and will meet at the REA office. It is also proposed that a meeting of this group will be held in the offices of Clyde Ellis, general manager of the National Rural Electric Cooperative Association.

Representatives of our group most sincerely appreciate the efforts that you have put forth on this issue and more fully appreciate your enthusiasm for this program. We will contact your office and await your recommendations for a program of presentation of this item to the Senate subcommittee, which has been scheduled for May 30. Your attendance to this meeting and the attendance of any other Congressmen you desire would be most helpful, as will your planning for its presentation.

The entire group is looking to you for guidance and confidence in this matter.

Yours very truly,

EDWARD E. WOLTER, *Manager.*

ROSEAU ELECTRIC COOPERATIVE, INC.,
Roseau, Minn., May 8, 1951.

Hon. HUBERT HUMPHREY,
United States Senate, Washington, D. C.

DEAR SIR: It has recently come to our attention that six amendments have been attached to the Interior appropriations bill and passed by the House of Representatives.

The six amendments result in a substantial reduction in the money needed for the building of many transmission facilities which affect the economy of our farm group. This will result in a grave shortage of power when power is most needed for our national defense.

It is respectfully asked that the Senate restore to the Interior appropriations bill all money which has been deleted by the six amendments which were passed by the House of Representatives.

Respectfully yours,

AUGUST A. BOURQUE, *Manager.*

BORDER COUNTIES POWER COOPERATIVE, INC.,
Warroad, Minn., May 9, 1951.

Hon. HUBERT H. HUMPHREY,
United States Senator, Minnesota, Washington, D. C.

DEAR SENATOR: We are attaching a resolution adopted by the board of directors of this cooperative at their meeting last night.

Although we know you have always supported REA and we are sure you will continue to do so we thought you would be interested in receiving a copy of this resolution.

We sincerely hope that these appropriations can be restored.

Very truly yours,

EINAR BERGAN, *Manager.*

RESOLUTION

Whereas the power supply for rural electric cooperative systems in many sections of the country has been severely threatened by six amendments to the Interior appropriations bill which was passed in the House on May 2; and

Whereas each of these amendments will adversely affect the farmers' electric systems; and

Whereas it is our belief that this is a result of the all-out power company drive for absolute monoply of power supply; and

Whereas it is an established fact that increased power facilities are essential to defense production; and

Whereas a reasonably safe and plentiful power situation cannot now be expected before the end of 1954: Therefore be it

Resolved, That this cooperative go on record as requesting the Senate of the United States to restore the funds to the Interior appropriation bill which were taken away by the action of the House of Representatives, and that the Senators from Minnesota carefully study this matter before it is brought up for a vote in the Senate so that they will be familiar with it and understand what this reduction in funds to the Interior Department will mean to the rural people of Minnesota; and be it further

Resolved, That a copy of this resolution be forwarded to Senator Edward J. Thye and Senator Hubert H. Humphrey, of Minnesota.

LAKE REGION CO-OP ELECTRICAL ASSOCIATION,
Pelican Rapids, Minn., May 4, 1951.

Hon. HUBERT HUMPHREY,
Senate Office Building, Washington, D. C.

HON. HUBERT HUMPHREY: Enclosed with this letter is a copy of a certificate of secretary of our association verifying a resolution which was passed at the annual membership meeting of the Lake Region Co-op Electrical Association urging your continued support of the advanced construction of Bureau of Reclamation transmission facilities in western Minnesota. It is our sincere hope that you will continue your fine support of legislation to provide ample and cheap electricity for the farmers in western Minnesota.

Respectively yours,

CLARENCE W. PETERSON, *Manager.*

CERTIFICATE OF SECRETARY

STATE OF MINNESOTA,
County of Otter Tail, ss:

I, Nels T. Hegseth, do hereby certify that I am the duly elected, qualified, and acting secretary of the Lake Region Co-op Electrical Association, hereinafter called the cooperative. And I do further certify that the following is a true and correct copy of a resolution passed and adopted by the membership of the cooperative at the annual meeting of the membership of the cooperative held on the 2d day of April 1951, said resolution being a part and portion of the original minutes entered in the minute book of the said membership. That said resolution was adopted by all members present. That no part or portion thereof has been rescinded or modified and is in full force and effect. That the following is a verbatim copy of said resolution:

Whereas the members of the Lake Region Co-op Electrical Association in annual session April 2, 1951, to discuss and transact the annual business of the Lake Region Co-op Electrical Association; and

Whereas to effectively secure an ample source of power and at reasonable rates at the earliest possible time and for the future survival of our association; and

Whereas representatives of the Lake Region Co-op Electrical Association have made an appeal before a subcommittee hearing on Interior appropriations to appropriate funds for advanced construction of Bureau of Reclamation transmission facilities through western Minnesota; and, therefore, be it

Resolved, That the 8298 connected members of the Lake Region Co-op Electrical Association in annual session hereby urges and petitions you as a Member of Congress of the United States of America, representing us in State and district, to give wholehearted support to legislation granting funds, for the fiscal year ending June 30, 1952, to the Department of Interior for the advanced construction of Bureau of Reclamation transmission facilities through western Minnesota; and be it further

Resolved, That copies of this resolution be sent to our Congressmen in the Ninth District and to our two United States Senators from Minnesota.

In witness whereof I have hereunto placed my hand and signature and affixed the seal of said cooperative this 16th day of April 1951.

[CORPORATE SEAL] NELS T. HEGSETH, *Secretary.*

BROWN COUNTY RURAL ELECTRICAL ASSOCIATION,
Sleepy Eye, Minn., May 16, 1951.

Senator HUBERT H. HUMPHREY.

DEAR SENATOR: As one of the members who testified in regard to the transmission lines earlier this year at subcommittee hearing, being one of the 16 co-ops in south and western power group. We received a letter from one of the Congressmen, Wier, stating that if the Senators don't do better than the House group we will be lost.

I can't understand just how the tally on the vote works but it seems some of our Congressmen are not helping us much.

Please keep us informed. Thanks for putting our resolution in the Record, at least it will show we were interested. Thanks.

Yours respectfully,

ART ZSCHETZSCHE, *Chairman.*

AGRA LITE COOPERATIVE,
Benson, Minn., May 21, 1951.

Senator HUBERT H. HUMPHREY,
Senate Office Building, Washington, D. C.

DEAR SENATOR HUMPHREY: Six amendments to the Interior Department appropriations bill (H. R. 3790) recently passed by the House will be of inestimable damage to the public power program. If enacted into law these amendments will also be very detrimental to REA cooperatives throughout the country that have been looking forward to the time when they would be able to secure an adequate supply of electric power at reasonable rates.

We know you are fully aware of this situation and that you will do all you can to defeat or modify these amendments when they come before the Senate.

The purpose of this letter is only to let you know that we deeply appreciate the fine work you are doing in representing us in the Senate, and that you have our unqualified support.

Sincerely yours,

VICTOR HANSON, *Manager.*

NO BUDGET BUREAU ESTIMATE

Senator CORDON. Senator, is there an item in the request for appropriation now for this particular construction?

Senator HUMPHREY. No, there is not.

Senator CORDON. Do you know whether it has been presented to the Bureau of the Budget?

Senator HUMPHREY. It has been through the Department of Interior. I must confess that the Bureau of the Budget has failed to make any reply, either negatively or affirmatively, that I have been able to ascertain.

Senator O'MAHONEY. When was it submitted?

Senator HUMPHREY. Some 2 or 3 months ago.

Senator O'MAHONEY. After the budget for this year was prepared?

Senator HUMPHREY. That is right.

Senator O'MAHONEY. Of course, the Bureau has been working under a directive from the President to avoid as much new construction as possible.

Senator HUMPHREY. That is correct.

Senator O'MAHONEY. And to authorize expenditures only for the completion of necessary projects and the construction of transmission lines that are required for the distribution of power from these projects that are presently being completed.

Senator HUMPHREY. I understand that policy.

Senator O'MAHONEY. That is probably the reason that the Bureau of the Budget did not do anything about it.

Senator HUMPHREY. I am sure that is correct. I have talked to them about it.

Senator O'MAHONEY. I know you realize the great difficulty of getting an appropriation in the appropriation bill this year without a budget estimate.

Senator HUMPHREY. I can assure the Senator from Wyoming, who has always been most considerate of the needs of the Midwest and other parts of the country, that his statement is an underestimation of what the difficulties are.

I have told my friends and constituents from Minnesota of these difficulties. I do want to point out, however, in reference to this particular project, that exception was made in the instance of South Dakota, in the instance of North Dakota, on the same sort of project we are talking about now.

PLEA FOR FUNDS FOR MINNESOTA

May I make a particular plea for my State? We have yet to share in any of these Federal programs. We feel we are definitely a part of the Union. We have had seven floods in 9 years out in my State. We still have not had very much, if any, flood control. We have never shared in any kind of hydroelectric power development.

Yet we, as taxpayers, will be paying our fair share of the bill in the Missouri River Valley. We will be paying more than those who are the prime beneficiaries, namely, in the States of North Dakota and South Dakota.

I want them to have it. I have been a supporter of this program, but we see the need in the southwest and western section of the State of Minnesota. Ours is one of the most productive agricultural areas in the country producing basic products that are needed for our defense effort, as well as for our civilian economy. We are only a few miles from the border where lines are presently authorized and under construction, namely, these lines in blue. In our particular area we find a shortage of REA generation power and of commercial power.

I want to point out to this committee the farm representatives from these REA's have proposed different things on their own, meeting in conferences. They have proposed that rather than continue building new generation plants, because there is a shortage some place, let us say, in the southern part, that they prefer to tie in the excess capacity that may be found in the northern part so as to fill the needs that would be down here around Worthington, Minn.

In other words, there is excess generation capacity in some parts of my State. There is a substandard amount in other parts.

It does not make good economic sense to build a new plant when there is capacity available, particularly when you know within 3 to 5 years a tremendous hydroelectric power project will be completed at the taxpayers' expense along the Missouri River.

We just feel that rather than invest again, make a double investment of our money, we ought to have a chance to share in the original investment.

PRESENT POWER FACILITIES

Senator CORDON. Do you know, Senator, whether the several cooperatives with the steam plants in the area are now integrated with plants of the private utilities? Is there any agreement between them so as to get the benefit of integration?

Senator HUMPHREY. I am not so sure about that. May I call upon one of my friends and neighbors here to give some information on that, or would you like to hold your question until he appears?

Senator CORDON. I will withhold it until the representatives come up.

Senator HUMPHREY. I shall conclude my part of the testimony by merely pointing out that our particular area of Minnesota—and I am sure the gentlemen from Iowa will be able to give adequate and full documentation for their part—is a portion that has literally 100 percent use of its land. It is a very fertile area.

Yet, at the same time, it is an area of the State that is suffering from manpower needs, from a labor shortage, and also an area that is dependent upon the most diversified kind of farming. That means mechanical equipment. It is not a one-crop area. It is not a wheat-producing section or just straight corn. We produce all kinds of commodities. In fact, in that particular area we produce vast quantities of dairy products. We have some of the biggest turkey farms in the country in that area.

We have many farm products that cannot be produced without the most modern mechanical equipment.

Electric power to us is the difference between life and death in terms of our farm economy. We have made a fine development in the REA. It is one of the finest developments in the country.

Our farm friends have come to me and to the other members of Congress, saying simply this, that it seems to be prudent business judgment to ask for the development of a transmission system that sooner or later must be developed if we are going to wheel the power there.

In other words, they would like to have this transmission belt available now so as to obviate the necessity of having to put extra generation plants in where they may not be needed, let us say, 5 to 6 years from now, because of the availability of cheap hydroelectric power.

That appears to be a type of cooperative understanding, namely, they are not trying to overdevelop their generation facilities. They are trying to limit their generating facilities within the realm of what the practical use of the power would be.

Also, may I say that if the power at the Missouri River Dam is to be used, Mr. Chairman, it will have to be used in my part of the country because we have more people in the section of the country that is mapped out there with red lines than in the whole State of South Dakota.

That section of the country has a population equivalent to the State of South Dakota. South Dakota and North Dakota are not as heavily populated as the State of Minnesota.

If that system of power development at Fort Randall, for example, and at Garrison, and down at Gavins Point is going to be used for good purposes, it will have to be wheeled sooner or later into that part of the country, into Iowa and up into Minnesota.

I am delighted to know that other States have made progress. We want to share with them in that forward movement.

I would now like to present Mr. Gravgaard.

Would you come forward, sir?

Mr. Gravgaard is president of the North Central Power Cooperative Association.

STATEMENT OF O. N. GRAVGAARD, PRESIDENT, NORTH CENTRAL POWER COOPERATIVE ASSOCIATION

TRANSMISSION LINES, MINNESOTA

Mr. GRAVGAARD. Mr. Chairman and members of the committee, I assure you that my remarks will be very short. I would like to remain standing because the Senator has stolen my thunder.

We have quite a few people here who would like to testify. While the Senator covered it well, we would like to present them.

As I stated, I am the chairman of our board of directors of Rural Cooperative Power Association, representing 24,000 members. Also president of our board of directors in our distribution cooperative in our local county serving 3,000 farm families; vice president of our State-wide association, and numerous others. I will not take time to mention them.

Also, I am operating a 400-acre farm. I would like to add here that with this tail tied to my kite as I have already explained, I am quite familiar with mild criticism.

The Senator has covered the situation so well that it would be just a waste of time for me to review it any further, because we have other matters of importance also.

I do want to get over to this committee the great appreciation of the use of electricity on our farms. I do not know of anything that has meant more to us, gentlemen, than the use of electricity on the farms.

In spite of our modern machinery, electricity is very important. The Senator referred to the hired help on the farms, or the labor. I use to employ three men on my farm and I am much older than when I began farming. I am 58 now. I am operating the farm alone.

I do not think I could do it without electricity.

Senator ELLENDER. How many tractors do you have?

Mr. GRAVGAARD. I just have one. I am running it alone.

Senator ELLENDER. I thought maybe you had children.

Mr. GRAVGAARD. My children are girls and they are married.

Senator ELLENDER. What do you grow?

Mr. GRAVGAARD. Small grain with 300 acres under cultivation. It means long hours sometimes, but we are used to long hours the same as you gentlemen. We can take it even though we are graying a little bit.

With your permission, Mr. Chairman and members of the committee, I am not going to take up more time. I would like to talk more, but I would like, if it is permissible, to turn this over now to the secretary of our power committee to further explain and to carry on where our Senator left off.

Thank you.

Senator HAYDEN. Thank you.

STATEMENT OF EDWARD WOLTER, MANAGER, RURAL COOPERATIVE POWER ASSOCIATION, MAPLE LAKE, MINN.

IN SUPPORT OF TRANSMISSION LINES, MINNESOTA

Senator HAYDEN. If you have a prepared statement, sir, we can put it in the record at this point and you may highlight your statement as you desire.

Mr. WOLTER. Thank you, Mr. Chairman.

(The statement referred to is as follows:)

STATEMENT OF EDWARD WOLTER, MANAGER OF RURAL COOPERATIVE POWER ASSOCIATION OF MAPLE LAKE, MINN., AND SECRETARY OF NORTH CENTRAL COOPERATIVE POWER DEVELOPMENT COMMITTEE

Mr. Chairman and gentlemen of the committee, my name is Edward Wolter and I am manager of Rural Cooperative Power Association of Elk River, Minn., and secretary of North Central Cooperative Power Development Committee. I speak today in behalf of the North Central Cooperative Power Development Committee, which is a coordinating committee consisting of 6 generation and transmission cooperatives, having a combined membership of 68 distribution cooperatives, and for 16 other distribution cooperatives, all of whose systems have been constructed from loan funds made available through Rural Electrification Administration. The six generation and transmission cooperatives are—

1. Dairyland Power Cooperative, La Crosse, Wis., a federation of 25 distribution cooperatives presently serving approximately 75,000 consumers in Wisconsin.
2. Corn Belt Power Cooperative, Humboldt, Iowa, a federation of 13 distribution cooperatives presently serving approximately 30,000 consumers in Iowa.
3. Southwestern Federated Power Cooperative, Inc., Creston, Iowa, a federation of 5 distribution cooperatives presently serving approximately 14,000 consumers in Iowa.
4. Minnkota Power Cooperative, Inc., Grand Forks, N. Dak., a federation of 10 distribution cooperatives presently serving approximately 34,500 consumers in North Dakota.
5. Border Counties Power Cooperative, Inc., Warroad, Minn., a federation of nine distribution cooperatives of whom only two would be affected and interested in the present proposal. These two distribution cooperatives presently serve 5,700 consumers in Minnesota.
6. Rural Cooperative Power Association, Elk River, Minn., a federation of 6 distribution cooperatives presently serving approximately 23,000 consumers in Minnesota.

The 16 distribution cooperatives who belong to the North Central Committee are—

Name	Headquarters	Number of members
Todd-Wadena Power & Light Cooperative	Wadena, Minn	3,250
Runestone Electric Cooperative	Alexandria, Minn	4,300
Lake Region Cooperative Electric Association	Pelican Rapids, Minn	6,747
Traverse Electric Cooperative	Wheaton, Minn	1,576
Agra Lite Cooperative	Benson, Minn	3,390
Minnesota Valley Cooperative Light & Power Association	Montevideo, Minn	5,180
Renville Sibley Cooperative Association	Danube, Minn	2,003
Lyon Lincoln Electric Cooperative	Tyler, Minn	2,486
Southwestern Minnesota Cooperative Electric	Pipestone, Minn	2,288
Federated Rural Electric Association	Jackson, Minn	4,154
South Central Electric Association	St. James, Minn	3,794
Nobles Cooperative Electric	Worthington, Minn	3,946
Brown County Rural Electric Association	Sleepy Eye, Minn	2,735
Central Minnesota Cooperative Power Association	Clements, Minn	2,213
Blue Earth-Nicollet Cooperative Electric Association	Mankato, Minn	3,585
Steel-Waseca Cooperative Electric	Owatonna, Minn	4,061
Total		55,708

The distribution systems, some of which are referred to and some listed above will ultimately serve 300,000 consumers in Iowa, Minnesota, North Dakota, and Wisconsin. These are not by any means the total number of farm and other rural consumers in those States who are served from REA-financed systems. It does, however, represent a very substantial number of them, and I am honored to speak for those who are interested in the present proposal.

PROPOSAL

We come to you today with a request for an appropriation of funds for the Bureau of Reclamation to construct immediately certain proposed interconnecting transmission lines for the purpose (*a*) of solving a critical power shortage problem that is presently developing in southwest Minnesota, which involves most of the 16 listed distribution cooperatives; (*b*) of bringing within the foreseeable future low-cost, federally generated hydro power to the preferred consumers in the marketing area of the dams located along the Missouri River in North and South Dakota, and thus solving in a large measure future power supply problems for the 68 distribution cooperatives who are members of the six listed generation and transmission cooperatives. This area is principally southwest Minnesota, western Iowa and part of Wisconsin.

Specifically, the proposal involves the construction of approximately 890 miles of 115-kilovolt and 160 miles of 230-kilovolt transmission lines and interconnected substations totaling 285,000 kilovolt-amperes at a cost of $25,000,000. Such lines are the following:

	Miles	Kilovolts
Valley City to Fargo, N. Dak.	[1] 73	115
Fargo to Detroit Lakes, Minn.	44	115
Detroit Lakes to Benson, Minn.	132	115
Benson to Maple Lake, Minn.	84	115
Benson to Currie, Minn.	90	115
Currie to Mankato, Minn.	95	115
Currie to Worthington, Minn.	33	115
Worthington to Sioux Falls, S. Dak.	64	115
Worthington to Blue Earth, Minn.	[1] 100	115
Blue Earth to Twin Lakes, Minn.	37	115
Blue Earth to Mankato, Minn.	40	230
Blue Earth to Humboldt, Iowa	65	230
Humboldt to Storm Lake, Iowa	55	230
Humboldt to Creston, Iowa	125	115

[1] Estimate.

A power pool would be created among the six generation and transmission cooperatives which would be joined by a seventh federated cooperative to be made up on the 16 listed distribution cooperatives. This would make immediately available to the members of the pool 60,000-kilowatt generating capacity, which is now held in reserve for stand-by purposes, but which would not be needed as reserve with such a pooling arrangement. Such release of capacity would be supplied as follows: 20,000 kilowatts from the Creston and Humboldt, Iowa, systems; 10,000 kilowatts from the Dairyland, Wis., system; 10,000 kilowatts from the Maple Lake, Minn., system; and 20,000 kilowatts from the Fargo and Minnkota, N. Dak., systems. It is estimated that this reserve capacity, when released for use in the pool, would be sufficient to meet the problem of power shortages of the 16 distribution cooperatives until hydro power from the Federal dams becomes available. During this period of operation—i. e., before the hydro power becomes available—the cooperatives would use the lines operated by the Government and pay sufficient rental therefor to repay in an adequate manner for the use thereof. Thereafter, the Government would continue to operate the lines, with the cooperatives purchasing power from the Government at points nearest their load centers. Interchange arrangements would be made among the generation and transmission cooperatives and with the Government so that greater firm capacity can be realized from the output of the hydro developments than would be available if such interconnections were not made. The cooperatives would provide their own subtransmission facilities, carrying energy from the Government's main load centers, which cooperative lines would also be made available to the Government to use for wheeling purposes to make energy available to other preferred consumers.

PROBLEM

The proposal, as outlined above, grew out of the threatening power shortage for rural people in the south and western parts of Minnesota and out of the efforts of those people and their friends who were able and willing to join in a mutual effort to reach a common goal—low-cost power for all of them. The plan represents the culmination of their combined efforts to solve the problem in the most practical, economical (in dollars, materials, and manpower), and satisfactory manner. All of the 84 distribution cooperatives involved have had since their inception a constant struggle to supply their members with power at a price the members could afford to pay. Low-cost wholesale power was just not available. Sixty-eight of them have had to meet this problem by banding themselves together into six federations and installing their own generation and transmission facilities. Such facilities gave them an independent, more reliable and lower-priced source of power, but such power still is more expensive than is wholesale power in many parts of the country. The 16 cooperatives in southwest Minnesota who have not installed their own generating capacity have continued to buy power from the four private power companies which have lines in that part of the State and from municipalities in their respective vicinities.

These companies are Otter Tail Power Co., Minnesota Power & Light Co., Interstate Power Co., and Northern States Power Co. All of them, as well as the municipalities who are supplying these cooperatives with power, are finding it increasingly difficult to meet the power requirements of their own consumers and more difficult to sell wholsale power to the cooperatives. Of course, the needs of their retail customers come first. Ample evidence will be presented today by witnesses who will succeed me as to the criticalness of the situation insofar as the people served by these cooperatives are concerned. Large portions of some systems will shortly be without any power unless steps are taken to substitute alternate sources of power for those that are being cut off. In other instances, the loads have built up to such proportions that, regardless of the adequacy of the cooperatives' efforts, low inconstant voltage results. In still other instances, the trunk lines are in such poor state of repair that outages occur much too frequently. High costs of operation for the cooperatives and poor service to the people are the effect of such poor sources of power.

It was not, however, until notice of termination of some power sources that the criticalness of the situation came to the fore. No alternate sources were available. Over 6 months ago the problem was presented in its entirety to the principal power suppliers in the area, the four power companies. Mr. Mackie, a representative for our engineering firm, has prepared a comprehensive statement of the situation as it existed then. A letter of August 28, 1950, requesting proposals of power availability, was sent to the above four power companies. No reply of any kind was ever received to this communication, an indication of the callous, unfriendly and unsympathetic manner in which these power suppliers treat these rural consumers.

We could not ignore the problem as our power suppliers have. A solution was necessarily sought elsewhere. Studies were made to determine what the costs would be to install additional independent generation and transmission capacity by the cooperatives to take care of the threatened shortages. Various and sundry other proposals were made, studied, compared and discarded in favor of the plan now proposed.

The people of this area—and not merely the rural people for whom I speak—have for years ardently cherished the hope that when the low-cost power from the Federal dams of the Missouri River Basin became available, they would be able to gain the advantages of it. Since such power is not yet available and will not be available for 2 or 3 years, an interim solution was sought by our people that would not only take care of the present emergencies but would gain the ultimate goal of a connection with an unlimited and dependable supply of low-cost power. And further we sought and found a solution that requires no greater investment in dollars, materials, or manpower than would the handling of the problem on a piecemeal and less permanent basis.

GENERAL OBJECTIVES

It was found that under existing Federal Power policy many miles of transmission lines are being built and many more will have to be constructed in order to market the power that will become available from Garrison Dam in North Dakota and Fort Randall Dam in South Dakota, as well as for other dams, authorized or projected, in South Dakota. Our proposal is in complete harmony with the

Bureau of Reclamation's objectives as authorized and directed by law; namely, to market power at wholesale at the load centers of preferred consumers and others at the lowest rate consistent with sound business principles. Likewise, the principle, as frequently enunciated by Congress, of serving particularly rural and domestic consumers in order to encourage the widest possible use of electricity will be served. We have been advised by the Bureau of Reclamation that our plans are in complete harmony with the ultimate plans of the Bureau. We believe that our proposal is not only in harmony with the Bureau's plans but that it will further such plans and be of great benefit to the welfare of the entire country.

PARTICULAR ADVANTAGES

The many advantages of our proposal in preference to any other solution of the problem becomes evident upon reviewing the benefits to be obtained therefrom.

1. First and foremost, it would quickly relieve a critical power shortage in a rural area affecting a large number of people.
2. It would create a power pool with all of the attendant benefits usual to such arrangements, such as, releasing for use reserve standby generating capacity, diversification of loads thereby increasing load factors, greater security from outages because of multiple feeder lines, etc.
3. After hydropower becomes available it would solve for many, many years the problem of securing low-cost power for approximately 300,000 electric consumers, which means well over a million people would be directly benefited.
4. It would require now less generating capacity, which is critically scarce, than any other possible solution.
5. It would require a lesser outlay of manpower and materials than any other possible solution.
6. It would effect an immediate savings in power generation costs because of the use of the stand-by units and because of other operating economies and a much greater savings will be effected when the hydropower becomes available.
7. Because of lower cost power it would permit the principle of area coverage to be furthered when materials are not needed for more direct defense purposes.
8. It would enable the 4 private power companies and the 13 municipalities who are serving cooperatives to conserve generating capacity and materials since the cooperative loads would become more self-sufficient.
9. It would enable the generation and transmission cooperatives to meet their power obligations to their member distribution cooperatives with a minimum of additional loan funds from REA for installing greater generating capacity.

CONCLUSION

In considering this proposal it should be kept in mind that this area adjacent to the Missouri River Basin would as a matter of course be subjected to considerably greater power shortages until hydropower becomes available, unless this proposal is given approval. This is naturally true because the anticipation of low-cost power in an area makes the additional of thermal capacity uneconomical. Power companies themselves are hesitant to install units which will in all probability be unneeded in 2 or 3 years. And so we can hardly expect to find a solution to our power problems in any way other than in our own ways. And if the situation is critical now, as we know it is, what can we expect from these outside power sources a year from now, and what 2 years from now? Certainly by the time the Bureau power is available, the situation would have become much worse unless the present proposal is approved. We are sorry not to have brought this situation to the Bureau's attention at an earlier date so that the lines herein requested could have been included in its annual budget request. However, we feel confident that that will not prejudice our request. The record shows that we were actively trying to solve our problem in every other way and we were in hopes of doing so. We believe, however, that the proposed solution is now the only satisfactory one.

MARCH 1, 1951.

Mr. GEORGE OLSON,
Chairman, Power Development Committee,
St. James, Minn.

DEAR MR. OLSON: We have reviewed the loan application submitted by Western Minnesota Power Cooperative and Southern Minnesota Power Cooperative to provide electric service to 16 rural distribution cooperatives in western and southern Minnesota. It is our understanding that your basic proposal is as follows:

1. A loan in the amount of approximately $11,000,000 is requested to construct 1,286 miles of subtransmission lines and related substations in southern and western Minnesota to deliver power to member cooperatives which will be purchased initially from a power pool consisting of Southwestern Federated Power Cooperative, Inc., Corn Belt Power Cooperative, Rural Cooperative Power Association, Western Minnesota Power Cooperative, Border Counties Power Cooperative, Inc., Minnkota Power Cooperative, Inc., Central Power Electric Cooperative, Inc., and Dairyland Power Cooperative, and later power will be delivered to the member cooperatives by the Bureau of Reclamation.

2. One organization (hereinafter called the borrower) consisting of the 16 rural distribution cooperatives is to be formed.

3. In order to integrate the power pool and effect an interconnection of existing power cooperatives with a total installed capacity of approximately 370,000 kilowatts, the Bureau of Reclamation is to construct approximately 1,050 miles of high-voltage transmission lines and related substations, in advance of the availability of Missouri Basin power, to be built from funds appropriated by Congress for fiscal 1952.

4. A license is to be granted by the Bureau to permit the use of the transmission system when constructed upon payment by the borrower of an annual rental charge. Such rental charge shall be based upon the proportional use that the borrower makes of the Bureau facilities with operation and maintenance work to be done by the Bureau. The license shall continue in effect until power is available from Missouri Basin projects. Thereafter, the Bureau is to assure delivery of power to the member cooperatives.

5. Borrower is to grant to the Bureau a license to be effective when Missouri Basin power becomes available for the use of the subtransmission facilities to be financed by the proposed REA loan to the extent necessary to supply requirements of member cooperatives and to others to the extent that there may exist from time to time surplus capacity in the subtransmission lines. The Bureau shall be obligated to use the subtransmission lines to serve member cooperatives. The subtransmission lines are to be operated and maintained by the borrower and, in consideration of the license the borrower is granting to the Bureau for the use of subtransmission lines the Bureau is to pay a wheeling charge of not less than 1 mill per kilowatt-hour for all electric energy transmitted over the subtransmission lines.

6. It is our understanding that the cost of power delivered to the member cooperatives prior to the availability of Missouri Basin power will be approximately 13.7 mills per kilowatt-hour. After the availability of Missouri Basin power (which is expected to be in 1954) the cost of power to the member cooperatives will be approximately 6.6 mills per kilowatt-hour.

A review of the proposed plan indicates that:

1. It will positively assure the availability of an adequate supply of power to the borrower's 16 member cooperatives as soon as Missouri Basin power becomes available.

2. It will result in substantial savings in power cost to the member cooperatives upon the availability of Missouri Basin power and will result in smaller savings prior thereto.

3. It will effect an interconnection of eight power cooperative systems with a generating capacity of 370,000 kilowatts which will permit the pooling of reserve generating units now maintained separately by each thus resulting in substantial savings in investment and critical materials.

You have indicated that the present power suppliers in the area do not now have adequate facilities to distribute Missouri Basin power to the member cooperatives in the quantities desired and that they have not submitted definite proposals setting forth any plan that assures the delivery of Missouri Basin power to the member cooperatives. Of the major suppliers, it is our understanding that the Otter Tail Power Co. has informed the cooperatives it serves that it would not be in a position to continue to make generation and transmission capacity available for our borrowers. You also have advised us that many of the 13 municipalities serving member cooperatives, have requested them to obtain other sources of power, since they cannot continue to supply the ever increasing requirements of the member cooperatives due to the magnitude of the rural loads compared to their own requirements. You indicate that you also requested proposals from all of the power suppliers in letters dated August 28, 1950 and that to date you have received no proposals. In the absence of any proposals from these suppliers, we concur with your conclusion that there is no assurance of the delivery of adequate low cost power to the member cooperatives from existing suppliers.

It is our understanding that the 8 existing generating cooperatives will be able to make available sufficient capacity to supply the power requirements of the borrower's 16 member cooperatives until Missouri Basin power becomes available in 1954. We also understand that, on the basis of the engineering studies submitted, the existing power cooperatives will be able to supply power to your members by using the reserve units of each power cooperative without the necessity of additional loans by REA for generating facilities for the purpose of supplying the borrower's 16 member cooperatives.

As you know, we have not had sufficient time to complete the formal engineering and financial studies required prior to the final approval of a loan for the construction of the subtransmission lines. Similarly, there has not, as yet, been a definitive examination of the legal aspects of the loan proposal by the Solicitor's office and such examination must necessarily await full crystallization of the loan proposal. You also are aware that we make this type of loan only where no adequate and dependable source of power is available in the area to meet the needs of the member cooperatives or where the rates offered by existing power sources would result in a higher cost of power to the member cooperatives than the cost from facilities financed by REA. Subject to the foregoing, it appears that we shall be able to give favorable consideration to your application for funds to construct subtransmission lines and related substations; provided, that—

1. The Bureau of Reclamation is able to proceed with construction of the transmission system in the immediate future.
2. Satisfactory contracts are entered into with the Bureau of Reclamation and existing power cooperatives embodying the features of the proposal referred to above.
3. Borrower will assume all existing loan obligations of Western Minnesota Power Cooperative.
4. Satisfactory 35-year power contracts are executed by the borrower with each of the 16 member distribution cooperatives.

Sincerely,

_____,
Administrator.

Mr. WOLTER. My name is Edward Wolter. I am general manager of the Rural Cooperative Power Association of Elk River, Minn., and secretary of North Central Cooperative Power Development Committee.

I would like to use the prepared statement to refer to and point out the development of how this arrangement came about.

MINNESOTA COOPERATIVES

Mr. WOLTER. The 16 cooperatives in south and western Minnesota have for several years had a bad power problem of getting sufficient current to meet the rising demands that came out of the war and have had a lot of people go to the cities because of migration where they were absorbed to the industrial program.

At that time they engaged a firm by the name of Ellerbe to make a study of their power problems. The study was to be based on satisfying their demands for electric service in the next several years and also in achieving the most economical supply.

After they had engaged the Ellerbe Engineering Co., their chief engineer, Mr. Ed. Mackie, went through with the study and has spent well over a year and a half in its development.

In this development Mr. Mackie and other committees of the group have worked out what their requirements are based on. They have gone to individual power companies and talked to them.

I should like to read a few excerpts from a statement which Mr. Ed Mackie has prepared. He was unable to be here. I wish that he were here so that he could present this more adequately than I. It was impossible for him to get here.

STATEMENT OF MR. ED MACKIE

I would like this statement placed in the record in its entirety, also.

Senator HAYDEN. The statement may be inserted into the record at this point.

(The statement referred to is as follows:)

STATEMENT OF EDGAR R. MACKIE, ELECTRICAL ENGINEER, ASSOCIATED WITH THE ENGINEERING FIRM OF ELLERBE & CO., ST. PAUL, MINN.

Mr. Chairman and gentlemen of the committee: My name is Edgar R. Mackie. I am an engineer employed by the firm of Ellerbe & Co., of St. Paul, Minn. I am appearing here today in behalf of 16 REA-financed cooperatives in southern and western Minnesota.

Ellerbe & Co. is the largest engineering organization in Minnesota. We have been doing load study and system design work for REA cooperatives in Minnesota and surrounding States for many years. We made the preliminary studies and the complete system design for Minnkota Power Cooperative at Grand Forks, N. Dak. This is one of the largest and most successful of the REA power cooperatives. Work connected with REA is less than 10 percent of our total annual business. We now have work in more than 20 States. The above statements are made only to give an indication of our qualifications to prepare the information contained herein.

Ellerbe & Co. made the engineering studies for the 16 cooperatives in the southern and western areas of Minnesota. Their present requirements are supplied by 4 private utilities and 13 municipalities. A critical shortage of power and transmission facilities exists in the area.

The municipalities in the area have done a fine job of helping the development of the REA cooperatives which they supply. The rapid increase in load experienced by the cooperatives, however, has caused the generating facilities of all but 3 of the 13 municipalities to be seriously overloaded. In many instances the REA load has become greater than their own load. It is not feasible for them to float a bond issue to install additional capacity to carry the REA loads. Seven of the municipalities have already requested that they be relieved of the necessity of carrying their REA loads. In most cases they are required to run every available unit of generation regardless of condition just to get by. For example, the municipal plant at Sleepy Eye lost one unit in November of 1950 which resulted in 3,200 REA members being out of service. They have served notice of cancellation of their contract with the REA cooperative.

The Ottertail Power Co. serves the northwestern portion of this area. That company has served notice to REA cooperatives it cannot supply additional substations as more farms are served and as more load develops. It has refused to sign new contracts and, by so doing, has removed the only available supply of power. The company's power shortage is so critical that it has served notice to some REA cooperatives that its present demand charge of $2.25 per kilowatt will be increased 50 percent for substations covered by existing contracts if the load exceeded present contract limits.

Our study further reveals that even if power were available the company's low-voltage transmission system is not adequate to carry the loads involved. The loads now being carried by this utility are so much beyond the efficient capacity of its facilities as to result in many cases of wide fluctuations of voltage and the cooperatives still have members who cannot be connected because of the lack of power.

The Interstate Power Co. serves the southern portion of the area. The cooperatives of this area are handicapped by the lack of adequate transmission facilities. A large portion of the lines owned by this company in this area is in the 24-kilovolt class. The company has indicated its willingness to do the best it can with these facilities, but it has placed low limits on the amounts of power that can be supplied to a given location.

The Minnesota Power & Light Co. serves only four substations in this area. Two of the member cooperatives are supplied by REA-financed generating plants.

The Northern States Power Co. serves the balance of the area. This company, being the largest of the four utilities involved, is naturally in the best position to serve its portion of the requirements. However, like the others, Northern States designed and built its systems before the REA cooperatives

came into being. Our studies indicate that the company's system is not capable of carrying the anticipated loads without major revisions in transmission facilities and the installation of additional generating capacity.

Our letter addressed to the four utilities and dated August 28, 1950, clearly indicates our problem and requests information on what quantities of power could be made available to us. We have received no answer to this letter from any of the utilities to whom it was sent.

The cooperatives have realized for some time that they were rapidly reaching the limit of the available power supply. With this in mind, and at the insistence of the cooperatives, we undertook a study and analysis of their power problems.

We have completed this study. The study shows beyond any reasonable doubt that the demand for power already exceeds, and will rapidly outdistance, the existing available supply. This situation must be corrected at once, if the development of these cooperatives is not to be restricted.

Our study further shows that the most practical and feasible solution to the over-all problem is to provide these cooperatives with Bureau of Reclamation power from the Missouri Basin. The only reasonable solution is to place the Bureau lines in operation at the earliest possible date.

We do not feel that such a solution would cause any of the utilities to suffer any loss from the facilities that they now own. By their own statements, their existing transmission facilities are inadequate and by their own statements they do not now have the needed generating capacity. The proposed power pool would relieve them of the necessity of installing this generating capacity. The installation of the Bureau lines would relieve them of the necessity of a major revamping of their transmission systems. We know of no other solution to this problem with so many benefits to all.

It is only through the Bureau facilities that an over-all power pool can be created into which all generating capacities of REA co-ops, municipalities, and utilities can be put together for the benefit of all.

These 16 cooperatives purchased approximately 180,000,000 kilowatt-hours in 1950 at a cost of approximately $2,430,000. By 1960 they will purchase 450,000,000 kilowatt-hours annually and at present rates they would pay $6,075,000. If their 1960 requirements are made available by the Bureau, they would pay approximately $2,700,000. This would result in a saving of $3,375,000 per year to the cooperatives.

With the Bureau lines in the area, the power supplied by the power pool can be distributed to the load centers of the individual co-ops by lines which the co-ops propose to build with REA loan funds. This phase of the transmission problem is further described in the attached communication from the Administrator of REA.

I believe the solution we propose is sound, effective, and desirable to 180,000 rural families in the Minnesota area. The Government investment, in my opinion, would be repaid in full.

MARCH 1, 1951.

Mr. GEORGE OLSON,
Chairman, Power Development Committee,
St. James, Minn.

DEAR MR. OLSON: We have reviewed the loan application submitted by Western Minnesota Power Cooperative and Southern Minnesota Power Cooperative to provide electric service to 16 rural distribution cooperatives in western and southern Minnesota. It is our understanding that your basic proposal is as follows:

1. A loan in the amount of approximately $11,000,000 is requested to construct 1,286 miles of subtransmission lines and related substations in southern and western Minnesota to deliver power to member cooperatives which will be purchased initially from a power pool consisting of Southwestern Federated Power Cooperative, Inc., Corn Belt Power Cooperative, Rural Cooperative Power Association, Western Minnesota Power Cooperative, Border Counties Power Cooperative, Inc., Minnkota Power Cooperative, Inc., Central Power Electric Cooperative, Inc., and Dairyland Power Cooperative, and later power will be delivered to the member cooperatives by the Bureau of Reclamation.

2. One organization (hereinafter called the borrower) consisting of the 16 rural distribution cooperatives is to be formed.

3. In order to integrate the power pool and effect an interconnection of existing power cooperatives with a total installed capacity of approximately 370,000 kilo-

watts, the Bureau of Reclamation is to construct approximately 1,050 miles of high-voltage transmission lines and related substations, in advance of the availability of Missouri Basin power, to be built from funds appropriated by Congress for fiscal 1952.

4. A license is to be granted by the Bureau to permit the use of the transmission system when constructed upon payment by the borrower of an annual rental charge. Such rental charge shall be based upon the proportional use that the borrower makes of the Bureau facilities with operation and maintenance work to be done by the Bureau. The license shall continue in effect until power is available from Missouri Basin projects. Thereafter, the Bureau is to assure delivery of power to the member cooperatives.

5. Borrower is to grant to the Bureau a license to be effective when Missouri Basin power becomes available for the use of the subtransmission facilities to be financed by the proposed REA loan to the extent necessary to supply requirements of member cooperatives and to others to the extent that there may exist from time to time surplus capacity in the subtransmission lines. The Bureau shall be obligated to use the subtransmission lines to serve member cooperatives. The subtransmission lines are to be operated and maintained by the borrower and, in consideration of the license the borrower is granting to the Bureau for the use of subtransmission lines the Bureau is to pay a wheeling charge of not less than 1 mill per kilowatt-hour for all electric energy transmitted over the subtransmission lines.

6. It is our understanding that the cost of power delivered to the member cooperatives prior to the availability of Missouri Basin power will be approximately 13.7 mills per kilowatt-hour. After the availability of Missouri Basin power (which is expected to be in 1954) the cost of power to the member cooperatives will be approximately 6.6 mills per kilowatt-hour.

A review of the proposed plan indicates that—

1. It will positively assure the availability of an adequate supply of power to the borrower's 16 member cooperatives as soon as Missouri Basin power becomes available.

2. It will result in substantial savings in power cost to the member cooperatives upon the availability of Missouri Basin power and will result in smaller savings prior thereto.

3. It will effect an interconnection of eight power cooperative systems with a generating capacity of 370,000 kilowatts which will permit the pooling of reserve generating units now maintained separately by each thus resulting in substantial savings in investment and critical materials.

You have indicated that the present power suppliers in the area do not now have adequate facilities to distribute Missouri Basin power to the member cooperatives in the quantities desired and that they have not submitted definite proposals setting forth any plan that assures the delivery of Missouri Basin power to the member cooperatives. Of the major suppliers, it is our understanding that the Otter Tail Power Co. has informed the cooperatives it serves that it would not be in a position to continue to make generation and transmission capacity available for our borrowers. You also have advised us that many of the 13 municipalities serving member cooperatives, have requested them to obtain other sources of power, since they cannot continue to supply the ever-increasing requirements of the member cooperatives due to the magnitude of the rural loads compared to their own requirements. You indicate that you also requested proposals from all of the power suppliers in letters dated August 28, 1950, and that to date you have received no proposals. In the absence of any proposals from these suppliers, we concur with your conclusion that there is no assurance of the delivery of adequate low-cost power to the member cooperatives from existing suppliers.

It is our understanding that the 8 existing generating cooperatives will be able to make available sufficient capacity to supply the power requirements of the borrower's 16 member cooperatives until Missouri Basin power becomes available in 1954. We also understand that, on the basis of the engineering studies submitted, the existing power cooperatives will be able to supply power to your members by using the reserve units of each power cooperative without the necessity of additional loans by REA for generating facilities for the purpose of supplying the borrower's 16 member cooperatives.

As you know, we have not had sufficient time to complete the formal engineering and financial studies required prior to the final approval of a loan for the construction of the subtransmission lines. Similarly, there has not, as yet, been a definitive examination of the legal aspects of the loan proposal by the Solicitor's

Office and such examination must necessarily await full crystallization of the loan proposal. You also are aware that we make this type of loan only where no adequate and dependable source of power is available in the area to meet the needs of the member cooperatives or where the rates offered by existing power sources would result in a higher cost of power to the member cooperatives than the cost from facilities financed by REA. Subject to the foregoing, it appears that we shall be able to give favorable consideration to your application for funds to construct subtransmission lines and related substations; provided, that—

1. The Bureau of Reclamation is able to proceed with construction of the transmission system in the immediate future.

2. Satisfactory contracts are entered into with the Bureau of Reclamation and existing power cooperatives embodying the features of the proposal referred to above.

3. Borrower will assume all existing loan obligations of Western Minnesota Power Cooperative.

4. Satisfactory 35-year power contracts are executed by the borrower with each of the 16 member distribution cooperatives.

Sincerely,

_____,
Administrator.

ENGINEERING STUDY OF MINNESOTA POWER REQUIREMENTS

Mr. WOLTER. The Ellerbe Co. is the largest engineering organization in Minnesota.

I will now read a part of his statement.

We have been doing load study and system design work for REA cooperatives in Minnesota and surrounding States for many years. We made the preliminary studies and the complete system design for Minnkota Power Cooperative at Grand Forks, N. Dak.

This is one of the largest and most successful of REA power cooperatives. Work connected with REA is less than 10 percent of our total annual business. We now have work in more than 20 States.

The above statements are made only to give an indication of our qualifications to prepare the information contained here.

In going about this study, they naturally had to take into cognizance the complete development of the system of these 16 cooperatives.

I should like to read certain points in here that are involved.

Ellerbe & Co. made the engineering study for the 16 cooperatives of the south and western areas of Minnesota. Their present requirements are supplied by 4 private utilities and 13 municipalities. A critical shortage of power and transmission facilities exists in the area.

The municipalities in the area have done a fine job of helping the development of the REA cooperatives which they supply. The rapid increase in load experienced by the cooperatives, however, has caused the generating facilities of all but 3 of the 13 municipalities to be seriously overloaded. In many instances the REA load may become greater than their own load. It is not feasible for them to float a bond issue to install additional capacity to carry the REA loads.

Seven of the municipalities have already requested that they be relieved of necessity of carrying their REA loads. In most cases they are required to run every available unit of generation regardless of condition just to get by.

For example, the municipal plant at Sleepy Eye lost 1 unit in November of 1950, which resulted in 3,200 REA members being out of service. They have served notice of cancellation of their contract with the REA cooperative.

In going through this study they have analyzed the requirements of the systems and how they could be served in the local areas by the power companies.

Senator ELLENDER. Do any of these cooperatives own their own plants?

Mr. WOLTER. Of these involved here, two, if I am correct, have been required to install their own small generating plants.

Senator ELLENDER. Do they do that through REA loans?
Mr. WOLTER. That is correct.
Senator ELLENDER. The idea is to integrate that power with the municipal power?
Mr. WOLTER. That is true.

QUESTION OF INTEGRATION WITH PRESENT POWER LINES

Senator ELLENDER. How about the privately owned utility. Will they attempt to integrate that power also?
Mr. WOLTER. There has been a discussion of each engineering practice that could be worked. The studies that they have come up with and the recommendations from the engineer disclosed that the transmitting facility in the area by private power companies were built originally and designed originally to serve their original load.
It is not adequate to take care of the additional stress that the REA's throw on it which far exceeds anything municipality load growth has ever experienced.
When they go into that additional growth, by putting another system in, they would release capacity from their present overloaded system.

INADEQUATE TRANSMISSION FACILITIES

In other words, their present growth is stretched. This study discusses several companies. I quote one, the Interstate Power Co., which serves the southern portion of the area:

The cooperatives of this area are handicapped by the lack of adequate transmission facilities. A large portion of the lines owned by this company in this area is in the 24 kilovolt class.

That is hardly practicable from the present-day load requirements.

The company has indicated its willingness to do the best it can with these facilities, but it has placed low limits on the amounts of power that can be supplied to a given location.

One item in the study is a letter they addressed to the power utilities involved in which they requested an outline of how service could be made. That letter was addressed August 28, 1950. This statement in here shows we have received no answer to that letter from any of the utilities to whom it was sent.
In getting into the phase of this a little faster, Senator Humphrey has a very thorough knowledge of what the requirements are and what the proposals are to make the service available. It sums up that the materials in this area that are presently there for us are totally inadequate.
Transmission facilities have to be available to carry the loads that are supplied by generators and that are required by the users.

EMERGENCY RESERVE POWER CAPACITY

We have installed in the various power cooperatives, which are included in my statement, and in the statement of Mr. Ellerbe, reserve capacity which is installed for the protection of each individual system. Each individual system is required to have one unit spare which is equal to the largest unit installed in the system in such manner the same as you have a spare tire on your car.

If the largest unit should go down, you have to have another unit equally as large to take its place if you are going to carry your users and satisfy their needs.

Senator HAYDEN. Do private utilities practice the same method of having reserve generators?

Mr. WOLTER. I believe they do. To what extent, I could not say.

Senator HAYDEN. It would not be to a great extent because I understand they are all interconnected.

Mr. WOLTER. I could not vouch for that.

Senator HAYDEN. That is what I understand, because that is the customary way of doing business throughout the United States.

One utility having a surplus at one time helps the other utility. They pay it back at another period.

Mr. WOLTER. That is similar to what we are proposing.

Senator HAYDEN. The impression I get from your testimony is that what you are concerned about is connecting up the surplus energy that is available at certain REA installations.

Would this transmission system also aid you in obtaining any surplus power available from private utilities?

Mr. WOLTER. I believe it would with whatever exchanges were worked out through the Bureau of Reclamation with private power companies.

Senator ELLENDER. That is why I asked if it was intended to integrate the systems, the privately owned systems, that are now furnishing part of this power.

Senator HAYDEN. My recollection is when we had this South Dakota transmission item up before us last year and the year before there was assurance that in the interim the private power companies would help out in every possible way.

Do you have that same assurance in Minnesota?

Senator HUMPHREY. At Sioux Falls, S. Dak., I understand there is some excess power, private power, or there will be. I think they are building some kind of a plant there. It appears to me with that line coming directly south of Sioux Falls any surplus that might be needed that was available could be integrated into a transmission system.

I am not familiar with the facts, but I know of the plant being constructed there.

TOTAL ESTIMATED COST OF PROPOSED TRANSMISSION LINES

Senator ELLENDER. I would like to ask you a few questions with respect to the cost of this.

You are now asking for $7 million. Does that include the building of the lines and also the substations?

Mr. WOLTER. The $7 million, as I recollect, was the funds that could be placed under contract this year and put into construction.

Senator ELLENDER. What would be the cost of the entire system? That is, in Iowa and Minnesota?

Mr. WOLTER. I believe we will have to check that with Mr. McPhail.

Mr. MCPHAIL. Senator Ellender, the total estimated cost of the transmission system that is involved as outlined on the map and colored red, is $29,052,000.

Mr. WOLTER. In answer to your question, Senator, our review of the situation there has been such that we have been given no assurances whatsoever from any power company that adequate power would be put into the lines to carry this interim period to that time.

That is the probable reason why we have turned to ourselves who have that power there, and who wish to pool it for each other's benefit.

Individually, we have that additional reserve capacity that is stand-by capacity. It is not really reserve. That is there for each system's operation. By pooling them we can take care of our reserve requirements and still leave available some 60,000 kilowatts to go into the southwestern part of Minnesota.

Senator HAYDEN. It appears to me that the private power companies would hesitate just as you do about putting in any more generation plants because they also expect to be able to acquire power from the Reclamation Bureau from these dams.

Mr. WOLTER. Yes.

I might point out that while many of us sometimes are rather critical or question some engineering practices which serve to extend an engineer's work, this engineering firm has made this one on the basis of using all that is there available and using it in the most economical manner.

SOURCE OF POWER DURING INTERIM PERIOD

That is why he has made this recommendation. He studied this system and what is available.

Senator ELLENDER. Has that system been devised in order to use the maximum load that can be produced and used in that area from Garrison and Oahe and those other dams that are in contemplation?

Mr. WOLTER. That is right.

Senator ELLENDER. The idea is simply to use this in the interm?

Mr. WOLTER. That is true.

Senator ELLENDER. What method has been devised so as to take care of the upkeep and repayment in the meantime? That is, until they are actually taken over and utilized in transmitting public power?

Mr. WOLTER. As I understand, that would be covered by contracts with the Bureau of Reclamation to reimburse them.

Senator ELLENDER. With whom?

Mr. WOLTER. By the REA's, the power cooperatives.

Senator ELLENDER. It would also take care of the interim, that is, from the time until the power would be coming from these dams?

Mr. WOLTER. That is true.

Senator ELLENDER. That would be about 2 or 3 years, would it?

Mr. WOLTER. As the studies of our system and of the load growth come out, we will be able to supply them with power up to 1954 and 1955, when the Bureau of Reclamation power would take over.

The thought has been that additional generation capacity and transmission facilities have got to be installed in the shortage. For less than that total cost they would supply Bureau of Reclamation lands which would be available to distribute energy from dams from then on.

In other words, the equipment and other things which would be put in there by us, or anybody else, would be obsolete in a few years.

Senator ELLENDER. Have you an estimate of the time required to complete this system as you have it outlined?

Mr. WOLTER. I would refer that to Mr. McPhail.

Senator ELLENDER. Mr. McPhail, do you have that information?

Mr. MCPHAIL. It is about a 3-year job altogether, Senator.

The principal features in order to give immediate relief can be done in 2 years. The rest of it then goes to about 1 year longer.

Senator ELLENDER. Can any of it be used as built?

Mr. MCPHAIL. Yes.

It would be the idea of the bureau to build those parts that can be used first, so they will render the maximum service.

Senator ELLENDER. What is your plan of repayment? Is it on the entire cost of the project, which you say would be $29 million plus?

That is to be paid back through the cooperatives in what period of time?

Mr. MCPHAIL. The proposition is that during the period when the REA's are making use of the lines they will pay all of it and other out-of-pocket costs for operation, maintenance, and that sort of thing.

In addition, they will pay amortization with interest and replacement reserve on the proportionate capacity of the system they will use.

Senator ELLENDER. Ultimately the Treasury will be repaid for all of this outlay. Is that on a basis of going rates of interest?

Mr. MCPHAIL. It is on the basis of interest covered under the reclamation law, 3 percent, which is about 1 percent greater on the average than the cost of money to the Government.

Senator HUMPHREY. Mr. Chairman, while I was testifying, Senator Cordon asked where these generation plants were located that had that excess power. I could not give the answer. I thought possibly that might be available.

Mr. WOLTER. Creston and Humbolt, Iowa, Twin Lakes, Maple Lake, and Benson, Minn., and two points in here that connect with the Minkota system.

Senator ELLENDER. Where?

Mr. WOLTER. North Dakota.

Senator ELLENDER. South of Grand Forks.

Senator HUMPHREY. It was my understanding there was this excess capacity. If they could be tied together, you would meet the requirements in the heavier load areas.

Senator HAYDEN. Even two of them would help the situation. If you have three, it is better yet.

Mr. WOLTER. The people of western Minnesota are standing there looking at the dams coming along. They know there is power. It makes them most reluctant to take any steps that would put them in position where any of the money would be wasted and made obsolete. We have the facilities, the generation facilities, that can be integrated with that system to take care of that problem until the Bureau of Reclamation Power can take it over.

That concludes my statement. Do we have time enough to hear other testimony?

Senator CORDON. I would like to say at this point that I have skimmed your complete prepared statement, I am familiar with it. I want to say now that it is perfectly apparent that those who have made even a cursory study of this over-all problem know that most of the power from those dams has got to find its outlet in the area with reference to which you are now testifying by some means or other. There can be no question about that.

Senator HAYDEN. Senator Thye expressed a great interest in this. His executive secretary is here and would like to make a statement on his behalf.

STATEMENT OF JOHN J. McCARTHY, EXECUTIVE SECRETARY TO THE HON. EDWARD J. THYE, A SENATOR FROM THE STATE OF MINNESOTA

LIST OF WITNESSES SUPPORTING TRANSMISSION LINE CONSTRUCTION FUND

Mr. McCARTHY. Senator Thye was committed to two previous engagements, addresses in Minnesota, one tonight and one tomorrow night. He is very unhappy he could not be here. I know he has talked to you on these questions. Therefore upon leaving he suggested I come here and deliver a message simply extending regrets that he could not be here with you.

Thank you, Mr. Chairman.

Senator HAYDEN. You said that you have other witnesses here. If they have something different to say, we will be glad to hear them. We have other business, of course. All of their printed statements will go in the record.

Mr. WOLTER. We have many others here who would like to describe some of the situations they have there at home. These people come right from their own rural areas. We get their telephone calls and criticisms.

Senator O'MAHONEY. I think we ought to tell the witnesses we have all the time there is, but it is very difficult to stretch it over all the witnesses.

Mr. WOLTER. We have statements here from Bertsel Brown, director and president, Plymouth Electric Cooperative Power Association, Le Mars, Iowa; Charles L. Pullen, manager, Ida County Rural Electric Cooperative, Ida Grove, Iowa, and member of power study committee of Northwest Iowa Power Cooperative; Edward G. Brown, Jr., director of Woodbury County REA, Lawton, Iowa; Alfred A. Schmillen, president of Cherokee County Rural Electric Cooperative, director of Iowa Rural Electric Cooperative (State-wide), president of North West Iowa Power Cooperative, and chairman of North Central Cooperative Power Committee, Marcus, Iowa; Leroy C. Sabie, manager of Southwestern Minnesota Cooperative Electric, Pipestone, Minn., and vice president, Western Minnesota Power Cooperative, Benson, Minn.; C. L. Palmerston, manager, Blue Earth-Nicollet Cooperative Electric Association, Mankato, Minn.; George Comstock, president, Federated Rural Electric Association, Jackson, Minn.; Charles H. Carl, manager, Nobles Cooperative Electric, Worthington, Minn.; Melvin Ouse, president, and Henry Sieling, director, Lake Region Cooperative Electric Association, Pelican Rapids, Minn.; Oscar Trstenson, secretary, Minnesota Valley Cooperative Light & Power Association, Montevideo, Minn.; J. Mauritz Nelson, secretary of board of directors, Rural Cooperative Power Association, Elk River, Minn., and manager of Kandiyohi Cooperative Electric Power Association, Willmar, Minn.; Marvin Sunvold, member of board of directors, Renville Sibley Cooperative Power Association, Danube, Minn.; Arthur P. Zschetzsche,

president, Brown County Rural Electric Association, Sleepy Eye, Minn.; Victor Hanson, manager, Agra Lite Cooperative and Western Minnesota Power Cooperative, Benson, Minn.; Paul Ritchter, manager, Todd-Wadena Electric Cooperative, Wadena, Minn., and Boyd Conley, president, Todd-Wadena Electric Cooperative; Earl E. Huber, counsel, Traverse Electric Cooperative, Wheaton, Minn.; Alexander Seifert, attorney at law, Springfield, Minn., and attorney for the Central Minnesota Cooperative Power Association, Redwood County, Minn.; and S. C. Martensen, manager, Lyon-Lincoln Electric Cooperative, Tyler, Minn.

Senator HAYDEN. Any statements they have may be inserted in the record when and if these gentlemen make a statement.

Senator ELLENDER. I wonder if there is much repetition in those statements. You know that it costs quite a bit to print these statements. I do not think that we ought to overlook any new information, but there is no point in duplicating previous testimony.

Mr. WOLTER. There is duplication in that their problem is entirely the same from one cooperative to the other.

Senator HAYDEN. The details are different.

RURAL POPULATION AFFECTED BY GOVERNMENT TRANSMISSION LINE

Mr. WOLTER. They are all different, but the problem is common all the way through. I should like to advise the committee there are 55,000 farm families involved in these 16 cooperatives in western Minnesota. The entire group in the power cooperative committee, which will receive the benefits from these lines, numbers 205,000 now. When presently connected it will exceed 300,000 families.

Senator O'MAHONEY. How much more electric energy will be consumed in this area than is now available with the present state of development?

Mr. WOLTER. With the present state of development it is hard to say because shortages provoke the lack of use of equipment. It keeps equipment from being used. They tried to find some other way to give it up.

Senator O'MAHONEY. I am trying to find out whether there is a present actual deficiency in the point of present actual use, or whether the deficiency has to do with your desire to build up this community or this general area.

Mr. WOLTER. No. The restrictions that they have now in the use of electric energy are very deterring factors in the load gross.

Senator HAYDEN. What has been the load gross?

You started out with very modest ideas as to how much electricity can be used on the farm. What is the average use now?

Mr. WOLTER. I would like to ask Mr. Torstenson. He has a statement in here.

Do you recall what that load gross is in your cooperative in the last 2 years?

STATEMENT OF OSCAR TORSTENSON, SECRETARY, MINNESOTA VALEY COOPERATIVE LIGHT & POWER ASSOCIATION, MONTEVIDEO, MINN.

TRANSMISSION FACILITIES, MINNESOTA

Mr. TORSTENSON. Mr. Chairman, during the last 2 years we have a 70-percent increase in the amount of electricity in our area.

Senator O'MAHONEY. How much more do you anticipate?

Mr. TORSTENSON. For the future, it is hard to tell. I remember in the early days they told us the farmers would never use 40. We find from the survey they are using approximately 400. We have approximately 600 new customers on our project now. Our average is about 300. The demand in the future will be a hard thing for anyone to determine.

Senator O'MAHONEY. What is the present demand not being satisfied?

SUBSTATIONS

Mr. TORSTENSON. I will give you some figures of our substations which may clarify that. Maybe I should proceed with my other remarks first.

Senator O'MAHONEY. Please answer the question. What is the present demand in your district that is not being satisfied because of the lack of power?

Mr. TORSTENSON. Our contractor limits or maximum firm capacity available is 4,350 kilowatts. The average monthly peak demand from November 1950 through April 1951 was 4,514. Our demand exceeds our maximum capacity available.

Senator O'MAHONEY. Right now?

Mr. TORSTENSON. Yes.

Senator O'MAHONEY. Is that typical of all the cooperatives? I see a lot of heads nodding, but we cannot get those into the record.

Mr. WOLTER. I have the information available here that came from the study of these 16 cooperatives. The 16 cooperatives purchased approximately 180 million kilowatt-hours in 1950. By 1960 they will purchase 450 million kilowatt-hours.

Senator O'MAHONEY. That is another projection into the future. What I am trying to find out is precisely what this gentleman testified; that the present demand in his cooperative is greater than the maximum capacity to supply. Is that characteristic or is that unusual? Is that the situation with respect to the other cooperatives or not?

Mr. WOLTER. That is the item that is common in the testimony we have submitted here for the record.

POWER DEMANDS

Senator O'MAHONEY. That the present demand is greater than the supply in each cooperative district?

Mr. WOLTER. That is correct. I should say the majority of the 16.

Senator O'MAHONEY. How many of the 16 are represented here physically in the room?

Mr. WOLTER. Twelve.

Senator O'MAHONEY. Will those rise in whose district the present demand is greater than the supply?

It is clear there is a majority

Mr. TORSTENSON. Mr. Chairman, I would like to submit my statement for the record.

Senator HAYDEN. That may be inserted.

(The statement referred to is as follows:)

STATEMENT OF OSCAR TORSTENSON

Mr. Chairman and members of the committee, my name is Oscar Torstenson. I am secretary of the Minnesota Valley Cooperative Light & Power Association, Montevideo, Minn. We serve about 5,300 farm families in 4 counties over about 2,700 miles of line. As a farmer and a member of the board of directors of this cooperative since it was organized in 1937, I have experienced the need for electricity on the farm.

In 1948 this cooperative purchased 9,605,340 kilowatts. In 1950 our cooperative purchased 16,322,530 at an average cost of 13.45 mills, a total sum of $219,912.44. This shows an increase in the use of electric power of 70 percent in a period of 2 years.

According to the average rate per kilowatt-hour of the Bureau of Reclamation schedule MRB–F1 for the load factor which we have, we are now paying more than 100 percent over what the power would cost at the Bureau rates.

The following are the operating figures for the last 6 months showing our actual average demand for electrical power and the peak contract limits on firm capacity available.

Substation	Contract power limit or maximum firm capacity available	Average monthly peak demand November 1950 through April 1951
	Kilowatts	*Kilowatts*
Madison	350	747
Gluek	1,000	1,055
Granite Falls	1,000	904
Wood Lake	1,000	983
Canby	1,000	825
Total	4,350	4,514

Northern States Power Co.'s facilities for supplying power to us are limited. At the present time with one generating unit at the Granite Falls plant shut down for repair, the voltage available at our substations is extremely low. With our substation transformers set to give us the highest possible voltage, which should be 7,740 volts, we have only 7,000 at the substation.

In the last 15 months we have recorded substation voltages fluctuating as much as 8 to 17 percent in 24 hours.

According to the Northern States Power Co.'s statement in the Montevideo American, December 14, 1950, there is a great increase in electric power demand in this area. The electric consumption in this area has more than doubled since 1945 and more generation and transmission lines must be built to take care of the demands.

Last December the board of directors of the Madison municipal plant, which furnishes power for our Madison substation, met with our board of directors and told us they could not continue to furnish us with the power needed to serve that area, and that we had to look to some other source for power as their plant was overloaded, and the growing demands for power in the city of Madison had exceeded their expectation.

Electricity on the farm is very important. Something must be done in order to furnish these farmers with the needed electricity so that they can repair their machinery, run their milking machines, water pumps, and so forth.

Let us not forget, that in 1860, 70 percent of the Nation's population was engaged in producing agricultural products. Today that figure is down to about

18 percent. If we expect this small percent of the Nation's population to produce the needed food, we must keep their electric motors running.

It seems to me that by building these Bureau lines and getting some of the surplus power from those generating plants, which are already built, to the area where it is needed, will save material and cost, and will help the farmers to continue to produce the needed food and fiber needed to feed and clothe the people of this Nation and which has also made this Nation great.

MISSOURI RIVER BASIN PROJECT

TOTAL ESTIMATED COST OF POWER DISTRIBUTION SYSTEM

Senator ELLENDER. Mr. McPhail, a moment ago you stated that the ultimate cost of this entire project will be $29,052,000. You said to complete it would require 3 years, but you could make connections to satisfy this demand in 2 years.

Mr. MCPHAIL. We will supply the most urgent ones. In that connection, as I understand it, there are about 270,000 kilowatts of installed capacity scattered around these various REA projects. If they are connected together, there will be about 70,000 kilowatts which would be surplus, by reason of combined reserves, that can go to supply the requirements of those users who are in short supply.

Senator ELLENDER. I understand that. What I was trying to develop was you can start off with $7 million. If that is to be completed in 2 years, that is, to give service, how much more would it require for those 2 years?

Mr. MCPHAIL. If we were to complete it in 2 years, we would have to have in the second year the full amount remaining after an appropriation of $7 million in the first year.

Senator ELLENDER. In other words, you would have to have $22 million next year?

Mr. MCPHAIL. That is right.

Senator HUMPHREY. Mr. Chairman, I think Mr. McPhail misunderstood that question. As I understand Senator Ellender's question it was: What amount would be required for the second year to give for those emergency areas, not for the whole system. He is talking about the whole system.

Senator ELLENDER. As I understood you a while ago, you said you could do the greater part of this in 2 years.

Mr. MCPHAIL. We can do the major part of it but not all of the relief necessary.

Senator ELLENDER. What will it cost do to this major part you speak of to give the relief they are asking for?

Mr. MCPHAIL. About $22 million total or about $15 million in the second year.

Senator ELLENDER. Seven million now and fifteen million in the second year.

Senator HAYDEN. Mr. McPhail, I would like to ask in connection with the submission made by the Interior Department to the Bureau of the Budget, have you prepared a justification?

Mr. MCPHAIL. We have submitted to the Bureau of the Budget a justification for a revised Missouri Basin project transmission division. That revision consists of the addition of the lines in western Minnesota and western Iowa. I have a copy of it here which I will be glad to submit for the record.

Senator HAYDEN. Yes. That would give us the figures we want.

(The information referred to is as follows:)

Bureau of Reclamation—construction and rehabilitation Missouri River Basin project transmission division

Total estimated cost		$305,737,000
Total to June 30, 1950		12,175,580
Unobligated balance, fiscal year 1950	$3,616,068	
Allotment, fiscal year 1951	19,435,408	
Adjustments	5,179	
Unobligated balance, June 30, fiscal year 1951	−108,000	
Obligation program, fiscal year 1951		22,948,655
Unobligated balance, June 30, fiscal year 1951	$108,000	
Original estimate of allotment, fiscal year 1952	18,709,640	
Amendatory estimate of allotment, fiscal year 1952	7,026,000	
Obligation program, fiscal year 1952		25,843,640
Additional estimated cost after fiscal year 1952		244,769,125

Authorization

The transmission division is an integral part of the Missouri River Basin project which was authorized by the Flood Control Act of December 22, 1944 (58 Stat. 887) in accordance with the plan of development set forth in Senate Documents 191 and 247 as revised and coordinated by Senate Document 475.

Location

The transmission division of the Missouri River Basin project includes the necessary facilities required to market power generated by Missouri River Basin power plants. This power market now includes North Dakota, South Dakota, Nebraska, and portions of Montana, Wyoming, Colorado, Minnesota, and Iowa.

Description

The Bureau of Reclamation will construct power transmission facilities to interconnect and coordinate the operation of all Government power plants in the Missouri River Basin to provide both firm and secondary power for irrigation pumping, construction power, sales to municipalities, cooperatives, private utilities, and other wholesale customers. The transmission system is designed to serve such customers who are within economical transmission distances of the power plants existing or proposed for development of the project. Power plants have been constructed on the Riverton, Shoshone, North Platte, and Kendrick projects in Wyoming. The Kortes power plant in Wyoming is now in service. Other power plants under construction are the Boysen power plant in Wyoming, Canyon Ferry power plant in Montana, and the Angostura power plant in South Dakota. These plants and others to be developed will be interconnected by the transmission line division of the Missouri River Basin project which will extend to Fort Peck, Garrison, Gavins Point, Oahe, and Fort Randall power plants being constructed by the United States Corps of Engineers.

Repayment

The revenue from the sale of electrical energy will include the return to the Treasury of the entire cost of the transmission division with interest in accordance with the prescribed provisions of reclamation law as authorized by Congress.

Status

Construction began in November 1947. At the close of fiscal year 1950 the following transmission lines were complete, with the exception of minor items of work: Gering-Sidney, Sidney-Sterling, Gering, Alliance, Cheyenne-Pine Bluffs, and Glendo-Lusk.

Major activity during the current fiscal year 1951 is as follows:

North Dakota.—The advanced program to serve REA cooperatives will be completed except for the Garrison-Bismarck-Jamestown line, the Garrison-temporary Fort Peck tie-line and minor clean-up work on other features. The Williston-Garrison Dam line will be placed in an operating condition by replacement of defective materials.

South Dakota.—The advanced program to serve REA cooperatives will be initiated and construction started on the Garrison-Mobridge-Oahe-Fort Randall transmission line.

Montana.—The Canyon Ferry-Great Falls line and Great Falls substation will be placed under construction. Surveys will be made for the Lovell-Yellowtail transmission line.

Wyoming.—The Alcova-Boysen section of the Alcova-Boysen-Lovell line, the Casper-Gering line, the Seminoe-Sinclair line, and the Thermopolis substation will be completed. The Garland-Lovell line will be placed under construction, as well as the Thermopolis-Lovell line.

Nebraska.—Work will be completed on the Fort Randall-O'Neill, Alliance-Chadron, Sidney-Ogallala, and Julesburg tap transmission lines and the Chadron and Julesburg substations. Work will be started on the Ogallala substation.

Iowa.—Continuation of surveys for the Sioux City-Omaha transmission line is scheduled during the year.

Work proposed fiscal year 1952 (regular)

The fiscal year 1952 program provides for the following:

North Dakota.—The advanced program will be completed. Construction of Bismarck-De Vaul 69-kilovolt line, and preparation of design for the De Vaul-Shields 69-kilovolt line will be completed.

South Dakota.—Construction of the Garrison-Fort Randall 230-kilovolt intertie will be continued. The advanced program will be completed and lines placed in service. Surveys and designs will be completed, specifications issued, and construction started on the Fort Randall-Sioux City 230-kilovolt line and Sioux City substation.

Montana.—Work will continue on the Canyon Ferry-East Helena 115-kilovolt lines. Construction will be started on the Canyon Ferry-Three Forks-Anaconda 115-kilovolt line, the Miles City-Yellowtail and Yellowtail-Billings 115-kilovolt lines, and the Billings substation.

Wyoming.—The Boysen-Lovell section of the Alcova-Boysen-Lovell 115-kilovolt line will be completed. Construction will start on the Lovell-Yellowtail 115-kilovolt line. The Garland-Lovell 69-kilovolt line, the Thermopolis-Lovell 115-kilovolt line, and the Boysen-Shoshone section of the Boysen-Riverton 34.5-kilovolt line will be completed. The Thermopolis-Owl Creek section of the Thermopolis-Lovell 34.5-kilovolt line and Lucerne substation will be completed. Materials will be purchased for the Glendo substation.

Nebraska.—Construction of the Bridgeport and Ogallala substations will be completed. Preconstruction work on the Omaha substation will also be completed.

Iowa.—All preconstruction work on the Sioux City-Omaha transmission line will be completed. Surveys will be initiated in three segments of the proposed power loop in northwest Iowa.

Work proposed, fiscal year 1952 (amendatory)

It is proposed to complete detailed surveys and investigations of all lines and substations for the advanced program in Minnesota, to assemble design data and prepare detailed designs, issue specifications, acquire necessary right-of-way, and award construction and equipment contracts, and make substantial construction progress toward completion in the following fiscal year.

It is also proposed to complete all surveys and preconstruction work including designs and specifications on the advance power program in Iowa. Rights-of-way will be obtained, material contracts for substation equipment and construction contracts for all lines will be awarded. These lines are scheduled to be completed in the following fiscal year.

Justification

Electric power requirements in the areas to be served by the transmission lines under construction or presently proposed are growing at a rapid rate. There is at the present time a serious shortage of power in these areas but power plants under construction within the basin by the Bureau and the Corps of Engineers will be of material assistance in meeting this shortage. The completion of the transmission lines has been scheduled at the most practical and economical rate possible to coincide with the completion of the power plants and the availability of additional power. Funds, therefore, are needed in fiscal year 1952 to continue the construction of transmission lines between major load centers and the sources of power in accordance with the present program to insure the availability of these facilities for the efficient distribution and utilization of additional power as it becomes available.

The facilities comprising the advanced program in Minnesota are required in the immediate interests of rural electrification and in the long-range interests of national defense, national security, and economy of materials. This is a plan of advanced construction designed to develop a transmitting system making adequate power facilities available to cooperatives, earlier than normally planned by the Bureau of Reclamation, for transmitting electrical energy from a source to be provided by the benefiting REA cooperatives. Because load growth has been so rapid in the area under consideration, cooperatives are faced with the problem of under capacity in their present lines, forcing plans for constructing a heavy subtransmission system which would connect all cooperative associations. Tentative plans call for some 69-kilovolt and some 115-kilovolt construction. The Bureau of Reclamation, as marketing agent for Missouri River power developments of the United States Army engineers, has recently extended the ultimate marketing area to a radius of 275 miles of Garrison and 250 miles of Gavins Point power plants. Initial power will be absorbed within systems now under construction more adjacent to the sources of power, but the ultimate combined installation of producing units will provide approximately 1,500,000 kilowatts of power. In order to carry out the provisions of the Flood Control Act of 1944 and provide low-cost power to the greatest number of preference customers, lines will be built into more populous areas now requiring additional line capacity. Earlier utilization of the ultimate Bureau system will economize in the long run on materials for lines by preventing needless duplication. Meanwhile, the production of food and fiber for defense can proceed without interruption due to shortages of energy for rural use, and will do much to alleviate the critical shortage of farm manpower now developing as the result of heavy demands of defense industries for additional labor.

Ultimate interconnection of the Missouri River system of large hydro plants by strong, high-capacity tie lines with large steam-electric systems of others will enable the seasonal exchange of large blocks of power and energy, thus enlarging the total firm power supply for advantageous use in large amounts by decentralized industry in the area, and will reduce the need for placing immediate new orders for steam-generating capacity to meet the ultimate rural load.

It is proposed that the Bureau of Reclamation construct a portion of its planned transmission system in Iowa as soon as possible. Prior to the operation of Fort Randall power plant, now under construction, future preference-class customers would utilize the transmission facilities in this advance program to obtain an interim supply of power from existing sources. By this means their power deficiency would be relieved until an adequate supply of power becomes available from Fort Randall power plant. During the interim period the customers would pay a transmission charge for the use of the facilities. In addition to covering all operating and maintenance costs, the charge would be adequate to cover the balance of the annual charges on the system in the ratio of the capacity utilized by the customers to the rated capacity of the system. Thus, those customers would contribute toward the repayment of the cost of the facilities included in the advance program.

MARKETING PROGRAM FOR HYDRO POWER

Senator HAYDEN. Of this power produced on the Missouri River, other than what is made available to these other areas, is a considerable part of it to be taken up and utilized by the private utilities?

Mr. MCPHAIL. We anticipate, Mr. Chairman, that the private utilities can and will be glad to take those amounts which remain after we have first taken care of the requirements of the preference customers as required by law. Our estimates indicate that within these areas in western Minnesota and western Iowa there is a probable market requirement by the preference customers of between five and six hundred thousand kilowatts ultimately.

Senator HAYDEN. When these dams are completed there will be a lot of power. You must take care of preferred customers. Will you produce more than the probable demand for the preferred customers?

Mr. McPHAIL. Our market studies up to this time have indicated that the preference customers can absorb essentially all of the firm power by about 1960. There will be very large amounts there, at least in the early years, of secondary-type power particularly during the navigation season in the summer and in years of heavy runoff. That can be sold to those agencies that have generating facilities of their own so they can pick up the load when the secondary power is not available.

Senator HAYDEN. That really is the kind of power the private utilities would like to buy?

Mr. McPHAIL. Yes; because it affords a larger saving for them. We like to sell it to them because agencies that have generating facilities of their own are the ones that can use that kind of power.

Senator HAYDEN. Because of the steam plants they otherwise would have to operate, or in the knowledge this power is coming into the market, they will not make investments in steam plants they otherwise would.

Mr. McPHAIL. That is true. Particularly we can sell them large amounts of peaking capacity that will save them a good deal of investment. In general, this is a pretty high-cost-fuel area. There are a few favorable spots, but in general fuel costs are high.

POWER RATES

Senator HAYDEN. What is going to be the average reduction in rates to consumers, wholesale consumers, of your power in this area when you get the hydro power?

Mr. McPHAIL. I can say that the Missouri River Basin power on the basis of a rate which is necessary to pay the project out will average about 5.5 mills. Perhaps some of these gentlemen here could give you an idea how much that would save them because I think their costs vary quite widely from one place to another.

Mr. WOLTER. Mr. Chairman, our engineering costs of load growth are projected to 1950. On the basis of purchasing 450 million kilowatt-hours which will be their estimated requirement for 1960, at the present rates they would pay $6,075,000 per year. If their 1960 requirements are available by the Bureau, they would pay approximately $2,700,000.

Senator HAYDEN. That means a very substantial saving then. Will that 5½-mill rate pay out the project?

Mr. McPHAIL. It will also provide such financial assistance as necessary to fully develop the irrigation portions of the project.

Senator HAYDEN. My understanding, in regard to these dams that we have before us on the map here, is that if it were simply to be developed for power only, it could be sold almost as cheaply to the Columbia Valley Authority. Is that right?

Mr. McPHAIL. I do not think that is true.

Senator HAYDEN. That is about 2½ mills?

Mr. McPHAIL. Yes, sir. Even if there were no irrigation involved in the Missouri Basin project, we could not hope to get as low a rate as that.

Mr. McPHAIL. I do not think it is true. I think the rate would still be in excess of 4 mills.

Senator HAYDEN. What do you estimate the irrigation figure would be in the 5½-mill rate?

Mr. MCPHAIL. It probably would be between 1 and 1½ mills.

Senator HAYDEN. If you do not have irrigation projects in mind, you could make that much lower rate for the power?

Mr. MCPHAIL. That is true.

Senator ELLENDER. What percentage of the cost of these projects has been charged to navigation?

Mr. MCPHAIL. I am sorry, Senator; I do not have a figure in mind.

SURVEY, PLANNING, AND CONSTRUCTION COSTS

Senator ELLENDER. Suppose we should accede to the request of appropriating $7 million. How much of that money would be spent for surveys and preparation to do the actual work, or have the surveys been made and are the projects in such a state you could start work immediately?

Mr. MCPHAIL. No, sir. We cannot start immediately. We have to do the survey and design work. We will have to purchase considerable amounts of rights-of-way.

In addition, we can, during the fiscal year, award a large part of the contract for construction.

Senator ELLENDER. How much of this $7 million will actually go to construction?

Mr. MCPHAIL. In round figures I doubt if over $3 million of that would go into actual construction.

Senator ELLENDER. The rest would be what?

Mr. MCPHAIL. Rights-of-way, designs, surveys, and so forth.

Senator ELLENDER. All under the supervision of Interior?

Mr. MCPHAIL. That is correct.

Senator ELLENDER. There is a contract with your own force?

Mr. MCPHAIL. We do it both ways.

Senator ELLENDER. You do not mean the construction? I mean surveys and preparation of plans, and so forth.

Mr. MCPHAIL. We do it both ways. I think a very large portion of this would be by contract. We followed that method in North and South Dakota with quite some success. We hope to follow it here also.

Senator O'MAHONEY. How rapidly could you produce?

Mr. MCPHAIL. We think if we had the money available in 1952 we can do the necessary survey work and design work so that we could let contracts in time for the contractor to begin work when the working season opens up in the spring of 1952.

Senator O'MAHONEY. What has been your experience with respect to the effect of inflation on the prices for contracts?

Mr. MCPHAIL. It has forced the prices up without question perhaps anywhere from 50 to 100 percent.

Senator O'MAHONEY. Have you made any computation in the Bureau to determine that fact?

Mr. MCPHAIL. Yes, sir; we have. We have presented for the record each year our price index based on our own construction costs and have also compared that with the price index of publications like the Engineer News Record.

Senator O'MAHONEY. Was that presented this year?

Mr. McPHAIL. I believe it is in the House hearings.

Senator O'MAHONEY. Are you sure? I would like to see it.

Mr. McPHAIL. If it is not in the House hearings, I will have it put in the record here.

(See pp. 1780–1782; also House hearings, pp. 627–639.)

Senator HAYDEN. How much would actually have to come out of the Treasury during the next fiscal year in regard to the payments to the contractors?

Mr. McPHAIL. I would say all of it.

Senator HAYDEN. Would be paid out during the fiscal year?

Mr. McPHAIL. Yes, sir.

Senator HAYDEN. Why I was asking, it is my recollection in connection with the transmission line further to the west, a certain amount of money was made available by cash and certain in contract authority because it was estimated the money would not be spent within the fiscal year.

Senator ELLENDER. That was to order the machinery. It takes time.

Mr. McPHAIL. In that connection, Mr. Chairman, the Bureau had requested $3 million. The $3 million contract authority was added in by the House, I believe. The $3 million represented the actual expenditure that the Bureau had contemplated. I think it would be close to that.

Senator HUMPHREY. Mr. Chairman, in order to expedite this because you had been most considerate with your time, and since the people have traveled so far, I thought we would call on a few of them to make a brief statement and submit their regular statement for the record.

Mr. Seifert, from Springfield, Minn., who is an attorney for the Central Minnesota Cooperative Power Association.

STATEMENT OF ALEXANDER SEIFERT, ATTORNEY AT LAW, SPRINGFIELD, MINN.

TRANSMISSION FACILITIES, MINNESOTA

Mr. SEIFERT. Mr. Chairman and members of the committee: My name is Alexander Seifert and I am an attorney at law at Springfield, Brown County, Minn. I am now and have been for the past 14 years the attorney for the Central Minnesota Cooperative Power Association of Redwood County. I have fathered that baby since its inception. We now have some 2,200 connected consumers, all of whom are bona fide farmers, with the exception of possibly 100 who live in a small village. We cover an area of 1,100 miles. Most of that area is within Redwood County.

Originally when we started, we got all of our power from the city of Springfield municipal light plant. When our demand increased so much by leaps and bounds, they were no longer able to furnish the current needed. It became necessary for us to procure an additional source of power, which we did in the west end of our district. We got it from the Northern States Power Co. Thereafter, there was a further increase in our power demand. While it is true our cooperatives signed a contract with the city of Springfield in 1948, and that ran for a period of 5 years, it is also true when the contract still had

some 3½ years to go, we were notified that they would cut our contract demand down from 1,000 kilowatts to 600. That left us in a very embarrassing position and predicament.

The result was we had to rephase some of our lines at tremendous cost and seek a further solution to our problems. Since then I have repeatedly talked to the mayor and the council at Springfield. They are reluctant to increase the capacity of their light plant. They have no stand-by service today. If that main power generation system should break down, all of the farmers in the east end of the district would be in the dark.

Gentlemen, electricity is no longer a luxury out on the farm in our district where farming is mechanized. The young men from the farm had been drafted into the Army. They have gone into industrial plants in larger cities, with the result that all of our farmers had to completely mechanize themselves and purchase electrical equipment to run their entire farm operations. If that source of steady and constant power should be cut off, or cannot be continued, our production of food for this emergency which we are facing will be very seriously cut down and many of these farmers will be compelled to sell out their milk cows or dairy herds, cut down their cattle production and poultry production.

The farmers in that district, and I have lived there for 36 years, have come to me and said that they have to have not only a steady constant source of power, but all the power they may need from time to time. That is the only way they can operate.

We hope and pray of you that you may see fit to let this request be granted so that we may in the very near future have this increased source of power, power at a rate that is commensurate with the ability of the co-ops to pay so that the farmers can continue to produce crops.

I would like to submit my statement for the record.

Senator HAYDEN. That may be inserted.

(The statement of Mr. Seifert is as follows:)

STATEMENT OF ALEXANDER SEIFERT, ATTORNEY AT LAW, SPRINGFIELD, MINN., AND ATTORNEY FOR THE CENTRAL MINNESOTA COOPERATIVE POWER ASSOCIATION, REDWOOD COUNTY, MINN.

Mr. Chairman and gentlemen of the committee, my name is Alexander Seifert, attorney at law of Springfield, Brown County, Minn. I am a duly licensed and practicing attorney at law in all of the courts of the State of Minnesota, and am now and for the past 14 years have been the attorney for the Central Minnesota Cooperative Power Association of Redwood County, Minn. This REA cooperative was organized in 1937. Our REA-financed distribution system is serving about 2,200 farms, mostly in Redwood County. We operate about 1,100 miles of line.

Our immediate problem is our power source. To start with, we purchased all of our power from Springfield, Minn., municipal plant. When they could no longer furnish all the power we needed, we entered into a contract with Northern States Power Co. for power for the western side of Redwood County. As their transmission line is west of our system in Lyon County, we had to build a transmission line to bring it in to the west side of our project.

We also get a small amount of power from the Interstate Power Co. in the west central part of Redwood County, but the eastern half of our project, which is served by Springfield municipal, is where we have a serious problem.

Our contract with Springfield, which we signed in 1948, calls for a demand of 1,000 kilowatts. Before the term of our contract expired, the city of Springfield signed another contract to furnish electricity to another cooperative, with the result that the plant capacity was not sufficient to continue through the life of the contract, and we have now been compelled to cut our load to 600 kilowatts. The result was a tremendous cost of line change-over, and our being compelled to look

elsewhere for additional source of power. The city of Springfield has been unwilling to enlarge their light plant to furnish all the current we need now or which we might need in the future at that end of our project. As a result thereof, about 1,000 consumers on the eastern half of our area do not have adequate and reliable service now, and cannot get all the current which they will need in the future.

The city of Springfield municipal light plant does not now have adequate stand-by power, and from all information, I am informed that they are unwilling to enlarge their light plant so as to furnish us all the power which our project will need in the future at that point.

On the other hand, when the Bureau lines, as proposed, are built, we will have adequate power for all of our foreseeable needs. Our people are anxious for you to give favorable consideration to this solution to their power problem, and we do urge you to reinstate the necessary funds for these transmission lines, so that our farmers may produce food and use their equipment to the fullest extent.

The need for these transmission lines is so drastic that the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., has seen fit to adopt a resolution dated May 8, 1951, on this very subject, a true, correct and complete copy of which resolution is hereto attached and made a part of this statement.

RESOLUTION ADOPTED BY BOARD OF DIRECTORS OF CENTRAL MINNESOTA COOPERATIVE POWER ASSOCIATION OF REDWOOD COUNTY, (MINNESOTA 60), PROTESTING REDUCTION OF APPROPRIATIONS TO DEPARTMENT OF INTERIOR PROGRAM FOR MARKETING AGENCIES FOR TRANSMISSION LINES FOR TRANSPORTATION OF POWER FOR MISSOURI VALLEY PROJECT

Whereas information has come to the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., that on April 24, 1951, by action of the House of Representatives of the United States, in proceedings then pending before it, did drastically cut and reduce the request for appropriations made by the Department of the Interior and its marketing agencies, and did also drastically cut the request made by the Bureau of Reclamation for the erection and construction of transmission lines, for the Missouri River Valley project, and other projects then listed and up for consideration on said date;

And whereas the action by the House of Representatives so had and taken is highly detrimental to the REA program for securing cheap power, and such action will greatly hamper and forever bar the REA from serving and completing its uncompleted lines of construction and will stifle and prevent the REA from procuring cheap power through the Bureau of Reclamation, in constructing, erecting and installing transmission lines for the transportation of power from its source to the various load centers;

And whereas the action so taken by the House of Representatives is a direct slap in the face of the farmers living in the western and southwestern part of Minnesota and eastern part of South Dakota, and will prevent the members of the 16 REA cooperatives united in a group to receive and use this extra power, if and when same is available;

And whereas the action by the House of Representatives has the object of playing directly into the hands of the large private power companies, and denies the REA cooperatives and their members from having access to said power, or the use thereof; and whereas, the various municipal utilities operating in the area covered by the said 16 REA cooperatives either do not want to furnish the necessary power needed by said REA cooperatives, or cannot furnish the necessary current in order that the existing lines may be efficiently maintained and full and constant power may be available for the needs of its various consumers;

And whereas the cutting and reduction of said appropriations as above listed, will of necessity result in a reduction of farm crops and products, because of a reduction and loss of manpower in rural areas, and may seriously cripple and hamper the present rearmament program, and result in food shortage for the Armed Forces;

And whereas one of the most important and basic rules and regulations of the Bureau of Reclamation and Missouri Valley Authority, and other public power authorities, is to the effect that REA cooperatives, farmers, and cities located within and adjacent to the Missouri Valley Authority, shall first be entitled to and have access to said source of power before private public utilities can obtain access to said current; and whereas the action of the House of Representatives has the effect of compelling, forcing, and directing all REA cooperatives to seek, receive, and purchase their power from private public utilities, and be their slaves

for the next century, and at rates highly exorbitant, and gives an absolute monopoly to private public power companies, as against REA cooperatives and its consumers;

And whereas the action of the House of Representatives so taken as above set forth is highly detrimental and against the best interests of the consumers of the sixteen REA cooperatives of southwestern Minnesota, including the Central Minnesota Cooperative Power Association of Redwood County, Minn.: Now, therefore, be it

Resolved by the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., that it strongly condemns the action so taken by the House of Representatives in cutting and reducing the funds of the Department of Interior and the Bureau of Reclamation, and thus prevent the erection and construction of transmission lines, for the transmission of power from the Missouri Valley, to areas in eastern South Dakota, and western Minnesota, thereby directly playing into the hands of the private public power companies, and stabbing their REA cooperatives and their farmers in the back, and denying them access to this cheap source of power; and be it further

Resolved, That this board go on record as demanding from the Members of Congress, from the State of Minnesota, that they reverse their vote and stand on said matter, and restore the appropriations which now have been stricken from the various bills; if and when the same are acted upon by the United States Senate; and be it further

Resolved, That the United States Senate, and particularly the two Senators from the State of Minnesota, be urgently requested to demand that the funds stricken from the bill for the Department of the Interior and Bureau of Reclamation for the building, erection, and construction of transmission lines from the source of power of the Bureau agency in the Missouri Valley Basin, and other similar projects, be restored and replaced, so that the consumers of REA cooperatives may have access to this cheap source of power first, before the same is diverted to the benefit and use of the private public power companies; and be it further

Resolved, That a copy of this resolution be signed by the president and secretary of this cooperative and sent to each of the House of Representatives from the State of Minnesota, and to the two United States Senators from the State of Minnesota, for their personal attention and answer.

Director Elmer Simon moved the adoption of the above resolution and Director Anton Prokosch seconded the same. Upon a vote being taken, the same was unanimously adopted and carried.

Passed and adopted at a special meeting of the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., held this 8th day of May 1951.

L. B. FREDERICKSON,
President of Said Association, Clements, Minn.

G. E. LUESCHER,
Secretary-Treasurer of Said Association.

STATE OF MINNESOTA,
County of Redwood, ss:

I, G. E. Luescher, secretary-treasurer of the Central Minnesota Cooperative Power Association of Redwood County, Minn., do hereby certify that the foregoing is a true, correct and complete copy of a resolution passed and adopted by the board of directors of the Central Minnesota Cooperative Power Association of Redwood County, Minn., at a special meeting held on May 8, 1951, and of the whole thereof.

Dated at Clements, Minn., May 8, 1951.

[CORPORATE SEAL] G. E. LUESCHER,
Secretary-Treasurer of the Central Minnesota Cooperative Power Association of Redwood County, Minn.

Senator HUMPHREY. Mr. Chairman, I would like to have Mr. Berens of the Brown County Rural Electric Association of Sleepy Eye, Minn., say a few words.

STATEMENT OF ROBERT J. BERENS, ATTORNEY, BROWN COUNTY REA, SLEEPY EYE, MINN.

TRANSMISSION FACILITIES

Mr. BERENS. Mr. Chairman, I am the attorney for the Brown County REA. Our president, Mr. Arthur P. Zschetzsche has prepared a statement and with your permission I would like to have it inserted in the record.

Senator HAYDEN. That will be done.

(The statement referred to is as follows:)

STATEMENT OF ARTHUR P. ZSCHETZSCHE, PRESIDENT OF THE BROWN COUNTY RURAL ELECTRIC ASSOCIATION, SLEEPY EYE, MINN.

Mr. Chairman and gentlemen of the committee, my name is Arthur P. Zschetzsche. I am president of the Brown County Rural Electric Association, with headquarters at Sleepy Eye, Minn. I am also a member of the South and Western Minnesota Power Development Committee.

I have been associated with the rural electrification movement in my State since it was started, and I have been president of my association since its inception in 1937.

Our distribution cooperative at the present time has 2,730 consumers in Brown County and parts of Nicollet, and Sibley Counties, Minn. Our ultimate system will serve approximately 3,200 rural consumers.

Ours is a true cooperative.

Beginning in 1937, we purchased power from the towns of New Ulm, Sleepy Eye, and Springfield, the three major towns in our territory.

Our cooperative would prefer to continue to buy power from these three sources. But because of our own great increase in power requirements, plus the increase in demand within these towns, the existing facilities are entirely inadequate.

The city of New Ulm has advised us that we must find another source of power within the next year. The city of Sleepy Eye has advised us that our contract with the town will be terminated in January 1952; and the city of Springfield has indicated that it would like for us to get another source of power by 1952.

Presently we are getting about all the power we can expect to get from these towns. The fact is they do not have any more to offer us. An idea of what we are up against can be had from an incident which occurred in November 1950. The Sleepy Eye plant broke down, leaving that part of our system near Sleepy Eye without electricity. We were able to serve part of that area with our sources at New Ulm and Springfield, but we had to appeal to our members by means of newspapers and the radio to cut down on their use of power. Even with these rather extreme measures, part of our system was without power at certain times of the day. The voltage was terribly low. This condition lasted about 3 weeks.

The Northern States Power Co. and the Interstate Power Co. have lines within our area of distribution. When our source of power at Sleepy Eye was interrupted, we built a temporary substation and were able to make a connection with the lines of the Northern States Power Co. This was very helpful.

Since our power supply problem became so critical we have been scouting every possibility in the area to get more energy. We have mentioned one source of power. Another possible source is the Interstate Power Co. We have been negotiating with its officials for some time. In correspondence we asked the company to sell us 800 kilowatts of energy at one point. The company advised us it could provide us with only about 400 kilowatts, or only one-half of the anticipated need at this one point. Thus, the over-all shortage of power in the area is emphasized.

Our largest source of power has been the city of New Ulm. Last year we paid New Ulm $79,494 for power, or an average cost of 13 mills per kilowatt-hour. This New Ulm rate has now been raised 3.5 mills, which will greatly increase our cost of power. For the year 1950 our cooperative paid over 50 percent of its entire revenue for wholesale power.

All of our contracts with our power suppliers contain fuel clauses, so it is very hard to say what any individual suppliers will charge us for energy. During the year 1950, our average cost of power to put into our lines was 16.3 mills.

High-cost power, just as the lack of power, can harm the farmers of my area. We run our cooperative on sound business basis. We are paying off our debt to REA on schedule and in time we will be debt free. But we need a good source of power at a reasonable rate; we need a source of power that will not only supply our needs today, but the needs of our children and grandchildren and at a fair price. This we do not have today. In my opinion, when power is made available from the Missouri River Basin project, as proposed by the Bureau of Reclamation, we will be assured of an adequate and dependable supply of power at a cost that will encourage all of our farmers to make more and better use of electricity. I firmly believe that the power from the Missouri River Basin project should be brought into Minnesota by the Bureau of Reclamation and then sold to various consumers as they may need it.

We distribute power in an area which is progressive and prosperous. We serve some of the best farms and farmers in the United States. They have been quick to adapt their farm life and their farm enterprises to electricity. They know how to use it to produce more efficiently and more abundantly. When we have a service interruption, it is very serious and costly to our farmers. It was farmers like my neighbors and the 2,800 on our co-op lines who fed the world during the last war, and we will do it again, but we need electricity and you men can help give it to us.

POWER RATES

Mr. BERENS. I would like to comment on that statement. One of the Senators asked a few minutes ago what the cost of the Bureau power was. I believe the answer was about five and a half mills. Last year our project, and we served about 2,800 farm families in Brown County, paid on the average 16.5 mills for power. So you can see why we want this power in there. Our main source of power, Senators, is from three towns in our area—New Ulm, Sleepy Eye, and the city of Springfield. They have all advised us we must get off of their municipal loads.

In fact, at the present time insofar as New Ulm is concerned, which is the largest city in the area, we have no contract. We are only operating through their good graces.

Another source of power in our area is the Interstate Power Co. We asked for 800 kilowatts. They advised us they can only give us 400 at this time. It is for that reason we are down here. We need it and need it badly. We want adequate power, cheap power and we want to know it will be there today, tomorrow, and next year as well.

Senator HUMPHREY. The next witness will be Mr. Sieling.

STATEMENT OF HENRY SIELING, LAKE REGION COOPERATIVE ELECTRIC ASSOCIATION, PERHAM, MINN.

TRANSMISSION LINES, MINNESOTA

Mr. SIELING. My name is Henry Sieling. I am from Perham, Minn. and the Lake Region Cooperative Electric Association. I have here a statement that I would like to submit for the record.

(The statement referred to is as follows:)

STATEMENT OF LAKE REGION COOPERATIVE ELECTRIC

GENERAL

Mr. Chairman and gentlemen of the committee, the Lake Region Co-op Electrical Association, with headquarters at Pelican Rapids, Minn., serving 7,800 of its members in the general area of western Minnesota and more specifically in the counties of Otter Tail, Wilkin, Becker, Clay, Grant, Douglas, and Todd in Minnesota, is vitally interested in the utilization of electric power to be generated

at the Federal dams in the Missouri River Basin over transmission facilities constructed by the Bureau of Reclamation. Further, to relieve a serious problem of power supply in the interim period at which Bureau of Reclamation power is not available, this association must seek adequate source of power to effectively render its members good service and at a reasonable rate at which it is economically feasible to transmit electric energy to the tremendous number of farm jobs which are predominant in this agricultural area.

POWER

The Lake Region Co-op Electrical Association at the present time operates six substations, for which power to five is supplied by the Otter Tail Power Co. of Fergus Falls, Minn., and power to one of these substations, operated by this association, is supplied by the Minnesota Power & Light Co. of Duluth, Minn.

The construction of a substation to be located in the area of Kent, Minn., has been deferred for a period of more than 2 years due to our inability to secure an adequate source of power at this location. In effect, the deferment of construction of this substation has materially reduced the ability of this association to render good and adequate service to more than 1,500 members served in Wilkin county, the western portion of the area served by this association.

Further, the substation located near Henning, Minn., was constructed in the fall of 1949, with the understanding that the local power company could and would supply power at this point. Failure on the part of the power company to negotiate the final contract in terms of, willful or otherwise, stalling, necessitated this association to seek other sources of power. During the period in which a new source of power was being located, several members did not have service available due to the fact that an adequate source of power was not at hand. Finally, in June of 1950, power from the Minnesota Power & Light Co. was made available at this location, following the construction of 19.8 miles of transmission line necessary to carry the power to this load center. This transmission line was built by the cooperative.

In December 1950 contracts for power at three substations, supplied by the local power company, expired. Contracts at two additional substations, supplied by the local power company, expire in June of 1952. Contracts offered by the power company are the standard term contracts, and to date, contracts of shorter term have not been offered, and offers of power contracts at lower rates are not in sight.

RATES

At the present time, approximately 94 percent of the power is purchased from the Otter Tail Power Co. at a rate of $2.25 per kilowatt on demand and energy at 7 mills per kilowatt-hour, with an average fuel adjustment of 0.3 mill per kilowatt-hour, with no terms for discount for cash payment within 10 days from billing date, which is usually offered in the industry. Approximately 6 percent of the power is purchased from the Minnesota Power & Light Co. at a rate of $1.30 per kilowatt on demand, and energy at a rate of 7.7 mills per kilowatt-hour, with an average fuel adjustment of $0.00059 per kilowatt-hour, and 2 percent discount if paid within 10 days of billing.

In 1949, our association paid 44 percent of its gross revenue for its wholesale power, and in 1950, the cost was even more, nearly 50 percent.

In 1950, this association purchased 18,539,824 kilowatt-hours at a total cost of approximately $315,177. Using the ultimate rate proposed by the Bureau of Reclamation, a net saving of approximately $151,588 would be realized by this association, using 1950 power-purchased figures. This tremendous saving would extremely enhance the position of this association to provide adequate power to its members at a reasonable rate, without straining their members' ability to use electricity to its fullest advantage for farm production.

CONCLUSION

In conclusion, the advanced construction of Bureau of Reclamation transmission facilities in the western and southwestern Minnesota area would make possible the goal of achieving a reliable and adequate source of power at a rate which the members of the Lake Region Co-op Electrical Association must receive to enable them to use electricity to the fullest extent for maximum farm production.

LAKE REGIONAL CO-OP ELECTRICAL ASSOCIATION,
MELVIN OUSE, *President*
HENRY SIELING, *Director*

ELECTRIC POWER AIDS WORK SHORTAGE

Mr. SIELING. I am a director of the Lake Region Cooperative Electric Association and have been since it was started. We have had power problems all the while there. We have 8,200 members. In 1949 we had to have more substations. We built one right under the Otter Tail Power Co.'s lines. In fact, we get our power from them and other points on their systems. We built one station right under their line. They let us sit there for 8 months and never hooked us up. Then we had to build 20 miles of transmission line at a cost of $70,000 to get the connection from Minnesota Power & Light Co. We got hooked up there. That station was taken care of.

We still have one station lying there. We did not build it because they would not promise us any power. That is at Kent, Minn.

The way it is now with the shortage of help, the farmers have not got their electric power and they are up against it. I am a dairy farmer; I know what it is.

Senator HAYDEN. How many cows do you milk?

Mr. SIELING. I milk 17. I raise all my own feed. I am a very diversified farmer.

So we certainly hope that we can get something out of this. We just have not had any promise to get any more power. We just have not got enough. You can see what has happened to us already. I think that covers our situation. Thank you.

Senator HUMPHREY. Now, Mr. Chairman, I would like to have Mr. LeRoy C. Sabie, manager of the Southwestern Minnesota Cooperative Electric, say a few words.

Senator HAYDEN. All right, Mr. Sabie.

STATEMENT OF LEROY C. SABIE, MANAGER, SOUTHWESTERN MINNESOTA COOPERATIVE ELECTRIC, PIPESTONE, MINN., AND VICE PRESIDENT, WESTERN MINNESOTA POWER COOPERATIVE, BENSON, MINN.

TRANSMISSION LINES, MINNESOTA

Senator HAYDEN. I notice you have a prepared statement, sir. If you desire, it may appear in the record in full at this point, and you may proceed to high light it.

Mr. SABIE. Thank you, Mr. Chairman.

(The statement referred to is a follows:)

STATEMENT OF LEROY C. SABIE, MANAGER, SOUTHWESTERN MINNESOTA COOPERATIVE ELECTRIC, PIPESTONE, MINN., VICE PRESIDENT, WESTERN MINNESOTA POWER COOPERATIVE, BENSON, MINN., IN SUPPORT OF CERTAIN MINNESOTA, NORTH DAKOTA, AND IOWA TRANSMISSION LINES

Mr. Chairman and members of the committee, my name is Leroy C. Sabie, manager of the Southwestern Minnesota Cooperative Electric, Pipestone, Minn., vice president of the Western Minnesota Power Cooperative, Benson, Minn., director, Minnesota Cooperative Electric, and a member of the six-man committee named to negotiate wholesale power contracts with utilities serving 16 electric cooperatives in southern and western Minnesota.

Our six-man committee, representing 16 cooperatives and over 55,000 rural consumers, has been negotiating for 2 years with power-company representatives in order to arrive at some satisfactory solution to our power-supply problems.

For many years now, and despite power company claims to the contrary, our member cooperatives have been faced with a critical shortage of electric

energy. Many of our cooperatives are served by overloaded 33-kilovolt lines located on the periphery of company transmission systems.

To further emphasize our problem, we would like you gentlemen of the subcommittee to consider, for just a moment, the rates paid by our systems for this obviously inadequate service. The 16 cooperatives pay an average of 15.4 mills per kilowatt-hour. The average rate paid by all electric cooperatives in the United States is 8.6 mills per kilowatt-hour. A comparison of the rates we pay with the national average is a clear indication of our predicament when considered together with the inadequate and insecure sources of supply. Our 16 cooperatives are serving about 55,000 farm and other rural establishments, and have exhausted every possibility of obtaining additional power except self-generation. As I have said, the companies and municipalities that serve us are apparently unable to grow along with us.

This committee is well aware of the Federal hydroelectric projects now under construction and authorized in the Missouri River Basin. These projects will, when completed with the necessary transmission lines, provide adequate power for all of the preference customers in the area. We understand that the Bureau of Reclamation has completed plans for the necessary lines to serve these customers in western Minnesota, eastern North Dakota, and central Iowa when the hydro-energy is available.

We are asking you gentlemen to appropriate money for these lines this year. The lines will be required in a year or so anyway, but if they are built immediately instead of at some future time, they can be used to interconnect our present generation capacity, and will solve our power problem. This will obviate the necessity of our having to spend large sums for individual generation capacity at isolated points. Such individual capacity, if installed, would stand idle once the Federal hydro power is available, and would be a complete waste of money and material needed elsewhere. But we must have more power from some source and without delay.

We are willing to pay rental on these lines until the Bureau is in a position to use them for the transmission of electric energy from the Missouri River projects. The lines will be available immediately on the completion of these projects and the Government will be spared the necessity of selling firm peaking power at dump energy rates for want of lines. Meanwhile, the rental fees will provide liquidation on the investment.

Increased farm production coupled with the manpower needs of the Armed Forces means that additional power will be needed on the farm.

As a member of the six-man committee, I have had a very good opportunity to discuss power problems with four utility companies. Our negotiations began 2 years ago, but to this day we have not had an answer on their ability to generate and transmit power to us in adequate amounts. They frankly admit that any expansion they have undertaken will be needed for other than REA consumers during the next 5 years at least. I believe that they do not have anywhere near the usual 15-percent reserve considered as necessary to reliable service.

To summarize, we urge that this subcommittee appropriate enough money to allow the Bureau of Reclamation to build the lines as outlined in red and green on the attached map. These lines can then be leased to our cooperatives until river power is available. We will then be assured of adequate power for our farming industry. Let me stress that all of the lines requested are a part of the ultimate plans of the Bureau and will not in any way add to the final cost of the project.

POWER SITUATION

Mr. SABIE. Mr. Chairman and members of the committee, I am manager of the Southwestern Minnesota Cooperative Electric, a power group and director in the State-wide, and I have also had the pleasure of being one of the six-man committee to negotiate all contracts for the 16 REA's.

In our discussions with the utilities in the last year and a half we have not been able to get the answers as to where the power is coming from and in what quantities.

They also stated in their meetings that whatever increase they are going to get will be consumed by their own members within 5 years; that any construction that they take on right now will be consumed by their own members.

I would also like to bring out now that there is a loop that covers Sioux Falls, S. Dak.

My local system is only 25 or 35 miles from there. They are going to purchase power from the Northern States Power at that point for 8.98, in other words, just a little bit under 9 mills.

Thirty-five miles away we are paying 13 mills. That will mean a savings of $1,000,000 in 10 years to just our 2,500 members alone.

That is the difference between getting that loop in South Dakota and not having that loop.

So you men, when you approved that loop for South Dakota, you made a wonderful saving for them and we would like to see the same thing happen in Minnesota. We would like to see some of that power developed that is at our back door being we are in the drainage area.

In our discussions with the utilities, as mentioned here, letters have been sent out to all four utilities, and I got the same answer every 3 months from the Northern States Power Co. that they just about arrived at a connection with the Otter Tail Power, and so forth.

But it is the same story. It has been that way for the last 10-month period.

So that the answer has not been forthcoming, and we do not know to this day what the four utilities are going to do. We met them all separately, and they, in turn, have had three or four meetings together.

I thank you for this opportunity.

Senator HUMPHREY. Mr. Chairman, I think that answers some of the reasons for our interest there when you see the rates.

Now, this is way out of my bailiwick, but Mr. Schmillen happens to be here with the Minnesota delegation, Mr. Alfred A. Schmillen, who is president of Northwest Iowa Power Cooperative.

CONSTRUCTION COST TRENDS

(See also p. 1770)

Senator O'MAHONEY. Mr. Chairman, before a new witness begins, I want to say to Mr. McPhail, that I have been checking through the House hearings. There appears a statement on page 627 which is entitled, "A Statement on Construction Cost Trends."

I must say that it is not altogether clear, but, in any event, it was made back in February. So it does not represent the present conditions.

I wonder if you would be good enough, Mr. McPhail, to check that statement again and give us the figures percentagewise, and by index, if you can, according to the Bureau of Labor Statistics index, on the increased cost of materials and of contract bids.

Mr. MCPHAIL. I will be glad to do that, Senator O'Mahoney.

(The material requested, subsequently furnished, is as follows:)

CONSTRUCTION COST TRENDS

Construction costs for the Bureau of Reclamation have increased considerably in the last 9 months. Subsequent to 1940, increasing costs had apparently reached their peak in the last quarter of 1948 and there followed down-trend into the third quarter of 1950. This trend was sharply revised and by April of this year construction costs as measured by the Bureau of Reclamation cost index stood at the same point as the 1948 peak, that is, 2.25 when compared with the 1940 base of 1.00. This sharp up-trend is due to several factors, among them, increase in wages required to hold men on the job site, increase in material shortages and prices as well as the fact there is less competition as defense construction is more attractive to contractors than reclamation work.

The cost indexes for construction work are based upon the ratio of prices bid for the various construction elements now as compared with those bid in the 1940 base period. This comparison of bid prices reflects not only the actual increase in costs as experienced by the contractor but also such elements as the contingencies he must face with respect to shortages of labor and materials. The Bureau does not provide escalator clauses in its construction contracts and thereby remove the normal business risk the contractor must assume. Therefore, the contractor's bid reflects the possibility of curtailment in construction because of the present emergency, as well as the probable increases in costs that will be experienced over the life of the job, in many cases of 3 or 4 years' duration. The principal items of work on reclamation projects consist of moving earth and placing concrete.

While the increase in cost of earthwork has not been as great as that for construction materials, the increase has been such as to bring our composite index, that is, for all types of work, to the present high of 2.25. For example, the prices quoted on a recent bid opening for turbines and generators for the Alcova Power Plant, indicate that the prices are approximately $9.35 per horsepower and $21.10 per kilovolt-ampere, as compared with $4.60 per horsepower and $9.60 per kilovolt-ampere, respectively, on a 1940 basis. The ratio of these costs when properly weighed indicate that this equipment will cost the Government approximately 2.15 more than what it would have cost in 1940. Reinforcing steel and structural steel have experienced an even greater increase in cost. Structural concrete costs approximately 2.45 more than what it actually cost in 1940. These and similar cost increases are shown in the attached tabulation and curves.

Because of the sharp upward trend that has been experienced in the last 12 months, and the recent bid prices received which indicate the continuation of this trend, it is our belief that before the end of calendar year 1951 our construction costs will, no doubt, exceed the 1948 high. The effect of price and wage stabilization cannot be appraised at this time, although it is hoped that this measure will in some way arrest the present upward trend. Our project estimates were prepared some 9 months ago in preparation for budget presentation and when costs were considerably lower and it may be that the current cost increases may well force us to revise some of our estimates upward.

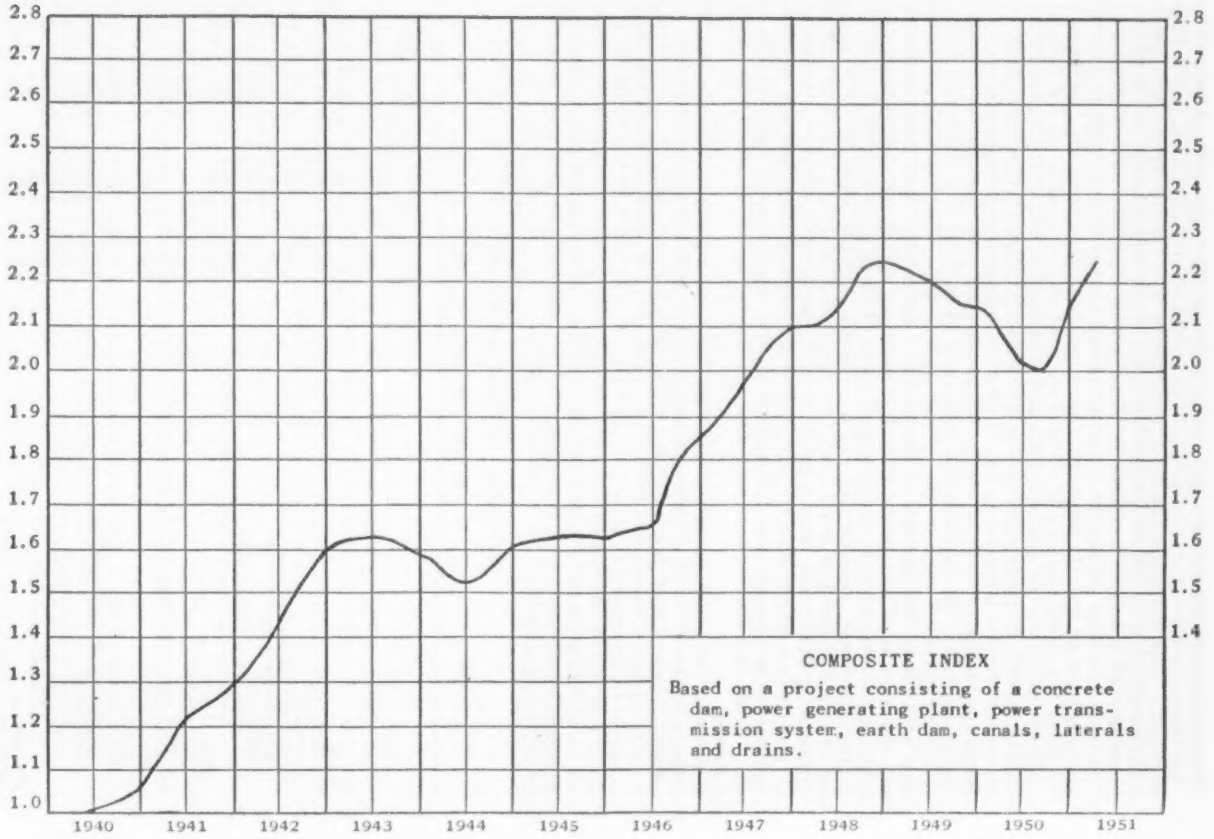
Cost indexes for construction work

[January 1940=1.00]

	April 1950	October 1950	January 1951	April 1951
Dams:				
Earth	$2.00	$1.75	$1.95	$2.10
Concrete	2.05	2.00	2.15	2.25
Pumping plants:				
Building and equipment	2.00	2.05	2.15	2.25
Structures and improvements [1]	2.25	2.30	2.35	2.45
Equipment	1.70	1.85	2.00	2.05
Pumps and prime movers	1.70	1.80	1.95	2.05
Accessory electric and miscellaneous equipment	1.75	1.90	2.05	2.05
Discharge pipes	2.10	2.25	2.35	2.45
Canals and conduits:				
Canals	2.15	1.95	2.15	2.20
Conduits (tunnels, free flow, concrete lined)	2.20	2.30	2.30	2.40
Laterals and drains	2.40	2.35	2.45	2.45
Power plants, hydro:				
Building and equipment	1.90	1.95	2.10	2.20
Structures and improvements [1]	2.20	2.25	2.35	2.40
Equipment	1.75	1.85	2.00	2.10
Turbines and generators	1.70	1.80	1.95	2.10
Accessory electrical equipment	1.70	1.85	2.10	2.10
Miscellaneous equipment	1.85	1.95	2.10	2.15
Penstocks	2.10	2.25	2.35	2.45
Transmission switchyards and substations	1.70	1.85	2.05	2.20
Transmission lines (wood pole)	1.95	1.80	1.90	2.10
Transmission lines (steel tower)		1.80	1.95	2.15
Permanent general property: Buildings	2.10	2.40	2.50	2.60
Roads and bridges:				
Primary roads	2.05	1.95	2.05	2.15
Secondary roads, unsurfaced	2.00	1.75	1.90	2.00
Bridges	2.10	2.10	2.20	2.40
Composite index	2.10	2.00	2.15	2.25

[1] Indexes for structures and improvements on pumping plants and power plants are based on a reinforced concrete structure.

NOTE.—The above cost indexes for construction work are based on the combined costs of material and labor furnished by the contractor and material and labor furnished by the Government.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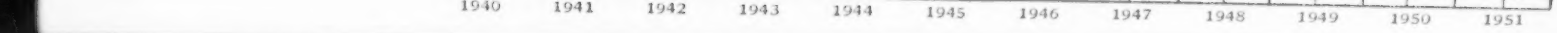
COMPOSITE INDEX
Based on a project consisting of a concrete dam, power generating plant, power transmission system, earth dam, canals, laterals and drains.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Senator HAYDEN. Mr. Schmillen.

STATEMENT OF ALFRED A. SCHMILLEN, PRESIDENT, CHEROKEE COUNTY RURAL ELECTRIC COOPERATIVE; DIRECTOR, IOWA RURAL ELECTRIC COOPERATIVE; PRESIDENT, NORTHWEST IOWA POWER COOPERATIVE; AND CHAIRMAN, NORTH CENTRAL COOPERATIVE POWER COMMITTEE, MARCUS, IOWA

TRANSMISSION LINES, IOWA

Mr. SCHMILLEN. I am Alfred A. Schmillen, representing the Cherokee County Rural Electric Cooperative, a distribution cooperative of 1,400 members; also a director on the State-wide association in our rural electric cooperative, and the Northwest Iowa Power Cooperative, which is represented by 12 distribution cooperatives in the northwestern corner of Iowa, two counties wide, from the Minnesota State line.

Senator HAYDEN. Mr. Schmillen, if you so desire, your prepared statement will appear in full in the record at this point, and you may proceed to high light it.

(The statement referred to is as follows:)

STATEMENT OF ALFRED A. SCHMILLEN, MARCUS, IOWA

Mr. Chairman and members of the committee, I am Alfred A. Schmillen of Marcus, Iowa, president of Cherokee County Rural Electric Cooperative with 1,400 members; director of Iowa Rural Electric Cooperative (Iowa Statewide); chairman of North Central Cooperative Power Committee; and also president of North West Iowa Power Cooperative, consisting of 12 distribution cooperatives, 2 counties wide, from Minnesota line south to near Councils Bluffs along the west side of Iowa, representing 25,000 farm families receiving electric energy from REA-financed distribution cooperatives for the purpose of transmitting river power from Fort Randall Dam of the Missouri River.

Since we are preference customers within the proposed area for immediate service area of electric energy which the Reclamation Bureau of the Department of the Interior reports will be available in the fall of 1953, we therefore, by resolution of our board of directors of North West Iowa Power Cooperative passed on May 28, 1951, request the reinstatement of the funds for Bureau of Reclamation for building transmission lines in Iowa. (Copy of resolution attached.)

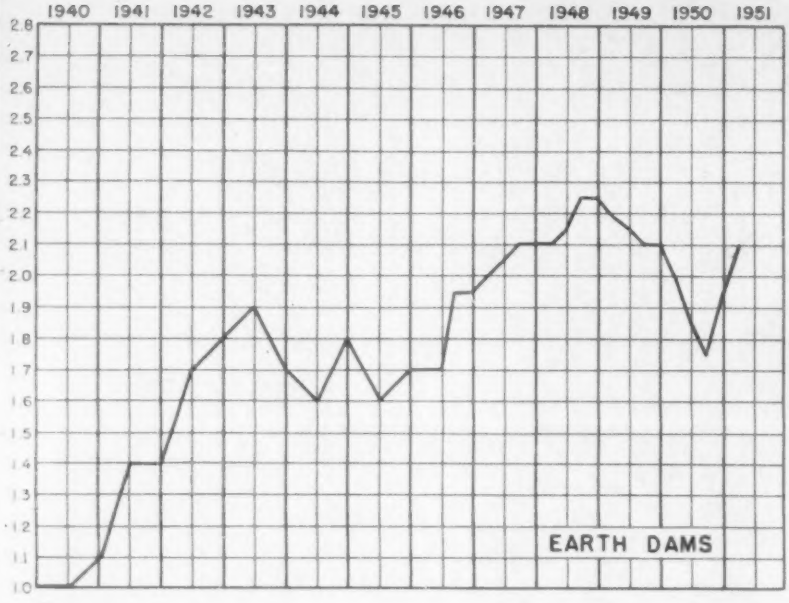
Parts of the area within northwest Iowa have no connection with the point of delivery of river power as proposed at Sioux City. Therefore, we recommend the Bureau of Reclamation be furnished funds for construction of such lines.

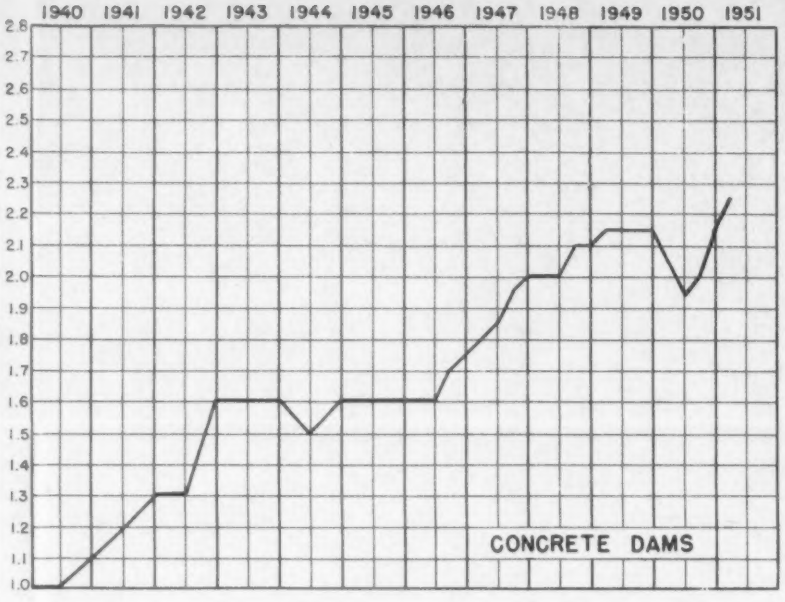
RESOLUTION PASSED BY BOARD OF DIRECTORS OF NORTHWEST IOWA POWER COOPERATIVE, MAY 28, 1951

After a full discussion, on motion by Director Dodge, seconded by Director Wendel, the following resolution was unanimously adopted:

"*Resolved*, That the cooperative send a delegation to Washington, D. C., to appear before the Senate Appropriations Committee to support the reinstatement to the appropriations as the Bureau of Reclamation of the transmission lines from Sioux City to Omaha, Sioux City to Humboldt to Mankato, and from Humboldt to Creston."

After consideration, the chairman appointed Charles Pullen, Alfred Schmillen, Edward G. Brown, Jr., and Burtsel Brown to comprise the delegation authorized to appear before the Appropriations Committee of the United States Senate.


1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951
EARTH DAMS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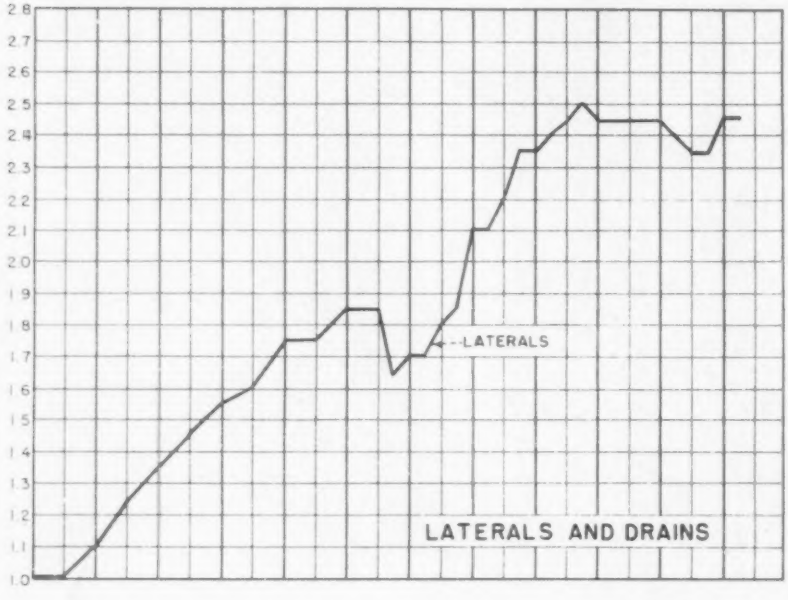
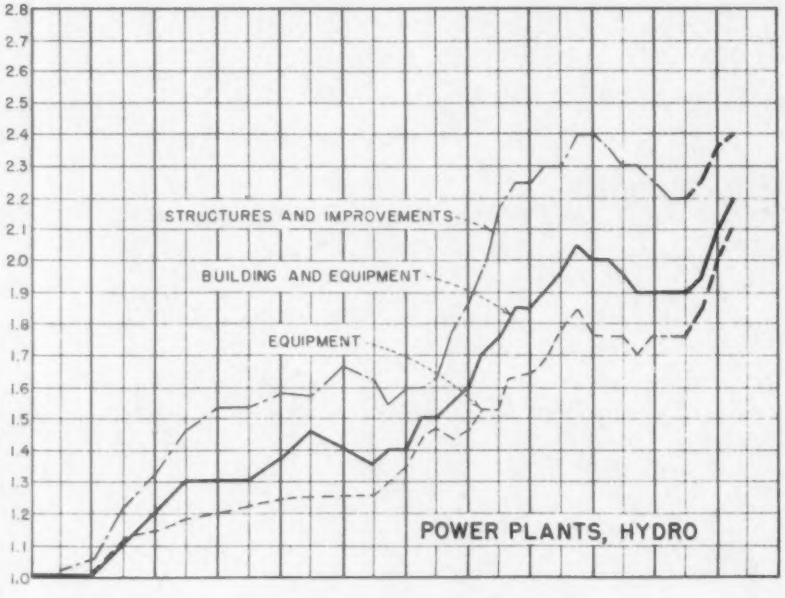
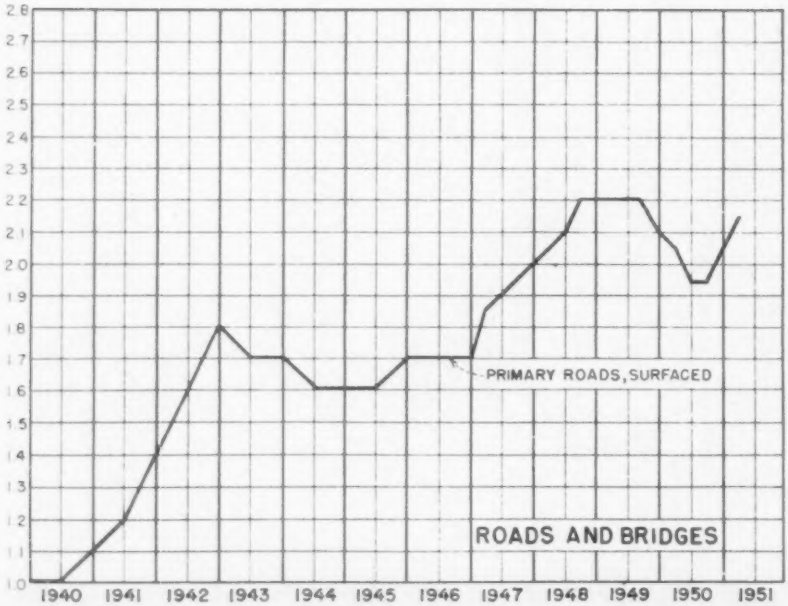
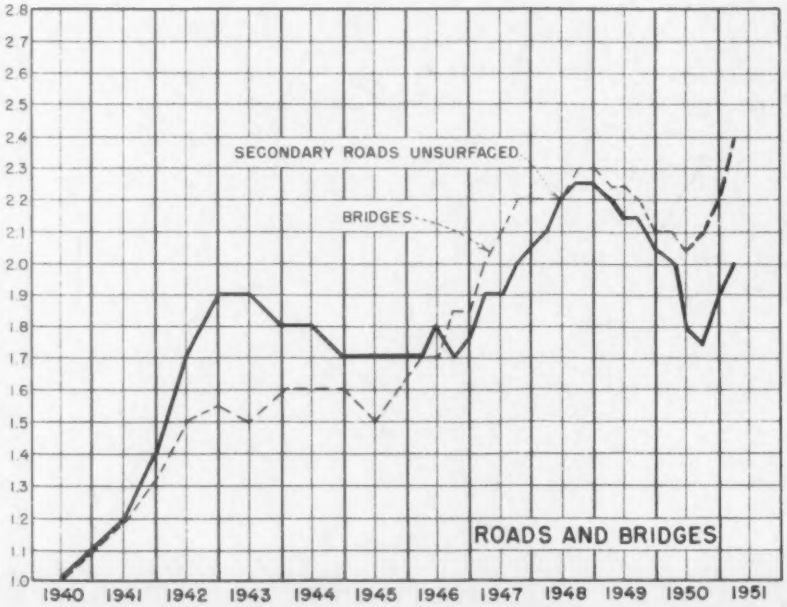
CONCRETE DAMS


LATERALS
LATERALS AND DRAINS


STRUCTURES AND IMPROVEMENTS
BUILDING AND EQUIPMENT
EQUIPMENT
POWER PLANTS, HYDRO


PRIMARY ROADS, SURFACED
ROADS AND BRIDGES
1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951


SECONDARY ROADS UNSURFACED
BRIDGES
ROADS AND BRIDGES
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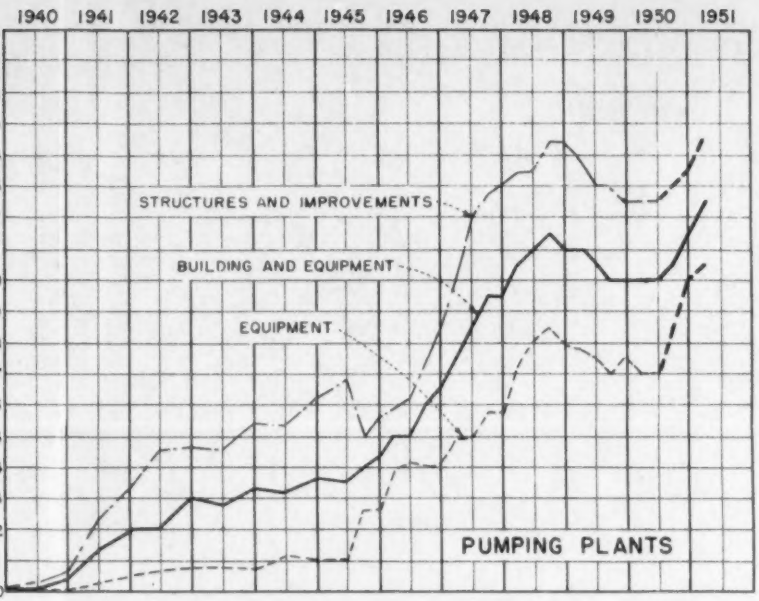
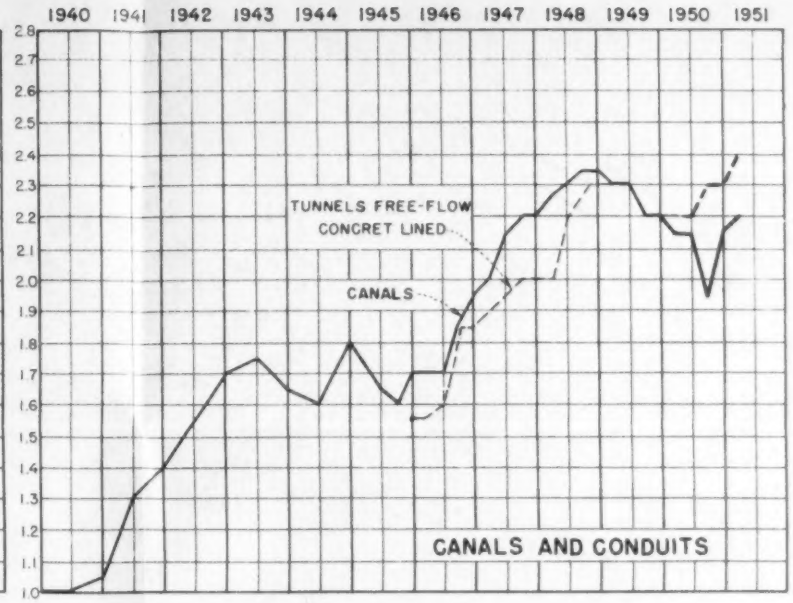
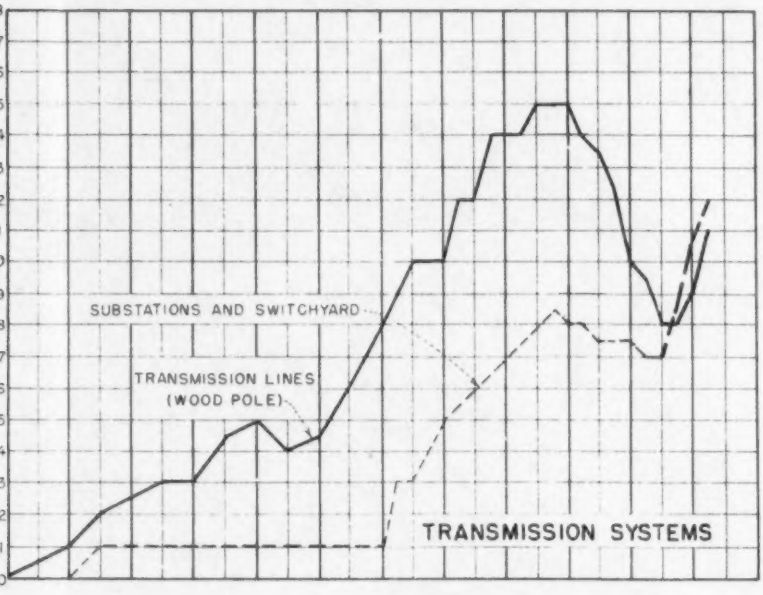
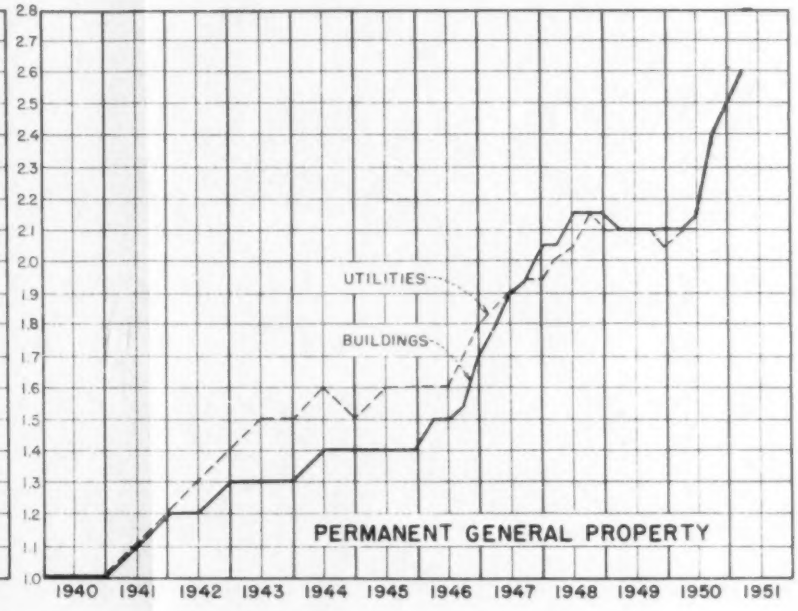
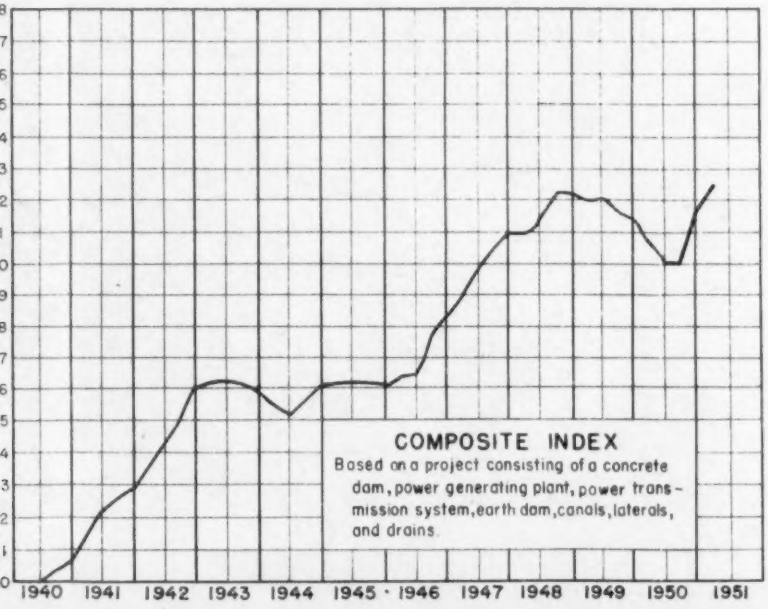

1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951
STRUCTURES AND IMPROVEMENTS
BUILDING AND EQUIPMENT
EQUIPMENT
PUMPING PLANTS








COMPOSITE INDEX
Based on a project consisting of a concrete dam, power generating plant, power transmission system, earth dam, canals, laterals, and drains.
1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951

BUREAU OF RECLAMATION

BRANCH OF DESIGN AND CONSTRUCTION

DENVER COLORADO

COST INDEXES FOR CONSTRUCTION WORK

JANUARY 1940=1.0

The above cost indexes for construction work are based on the combined costs of material and labor furnished by the contractor and material and labor furnished by the Government

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Senator HAYDEN. Mr. Schmillen.

STATEMENT OF ALFRED A. SCHMILLEN, PRESIDENT, CHEROKEE COUNTY RURAL ELECTRIC COOPERATIVE; DIRECTOR, IOWA RURAL ELECTRIC COOPERATIVE; PRESIDENT, NORTHWEST IOWA POWER COOPERATIVE; AND CHAIRMAN, NORTH CENTRAL COOPERATIVE POWER COMMITTEE, MARCUS, IOWA

TRANSMISSION LINES, IOWA

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After consideration, the chairman appointed Charles Pullen, Alfred Schmillen, Edward G. Brown, Jr., and Burtsel Brown to comprise the delegation authorized to appear before the Appropriations Committee of the United States Senate.

POWER FROM MISSOURI RIVER BASIN PROJECT

Mr. SCHMILLEN. It goes to a point just north of Council Bluffs, Iowa. It is along the Missouri River not far from the source of power that is being developed in the Missouri Basin.

This North West Iowa Power Cooperative is represented by about 25,000 farm families. In the meeting of our board of directors on the 28th of May 1951, they instructed me to present the resolution to this committee that they resolved that we give our support to the building of bureau lines to our area and areas connecting these power cooperatives which are now in existence.

We do have a point of delivery at Sioux City, which is the edge of our North West Power Cooperative, but we do have several points in that area that we would have no connection with.

Therefore, we feel that a system of bureau lines within our area would be very beneficial as far as getting power as preference customers.

Senator HAYDEN. Thank you.

Mr. McPhail, I notice on this map a green line from the Fort Randall Dam to Sioux City and down to Omaha. What is that line?

Mr. MCPHAIL. This line that you speak of, Mr. Chairman, is a line which we are asking money for in the regular 1952 bill.

Senator HAYDEN. That is the impression I had, that there was some money in this bill for construction this year; that the House allowed.

Mr. MCPHAIL. The House has allowed money from Fort Randall as far as Sioux City. They did not allow money for this line down to Omaha, nor did they allow money for this line as far as Storm Lake.

Senator HAYDEN. Where did they find that money? Was it in the budget estimate for transmission?

Mr. MCPHAIL. Yes, it was in the budget estimate and it was eliminated by specific reference in the House committee report.

Senator HAYDEN. The House report indicates certain supply lines in Montana that were omitted. Then it shows $207,463 for Sioux City to Omaha lines. That was the line from Fort Randall to Sioux City that was allowed.

Mr. MCPHAIL. It was allowed; yes, sir.

Senator HAYDEN. Did you request a restoration of that line?

Mr. MCPHAIL. Yes, sir. We had it before your committee.

Senator HUMPHREY. The next gentleman that I think would like to appear is Charles L. Pullen, manager of the Ida County Rural Electric Cooperative.

Mr. Pullen.

STATEMENT OF CHARLES L. PULLEN, MANAGER, IDA COUNTY RURAL ELECTRIC COOPERATIVE, IDA GROVE, IOWA

TRANSMISSION LINES, IOWA

Senator HAYDEN. Mr. Pullen, I understand you have submitted a prepared statement to the committee.

Mr. PULLEN. Yes, Mr. Chairman.

Senator HAYDEN. Your statement will appear in full in the record and you may proceed to highlight it.

Mr. PULLEN. Yes, thank you, sir.

(The statement referred to is as follows:)

STATEMENT OF CHARLES L. PULLEN, MANAGER, IDA COUNTY RURAL ELECTRIC COOPERATIVE, IDA GROVE, IOWA

Mr. Chairman and gentlemen of the committee, my name is Charles L. Pullen, manager of the Ida County Rural Electric Cooperative, a member of the power study committee of the North West Iowa Power Cooperative and representing them on the North Central Power Cooperative Committee, a member of the policy committee of the Iowa Rural Electric Cooperative Association and president of the Ida Grove Independent School.

The North West Iowa Power Cooperative was organized approximately 2½ years ago for the purpose of assisting our members to get economical and dependable electric service through the development of the Missouri River Basin by the Army engineers and the Bureau of Reclamation. Existing transmission facilities of the power companies to Ida County are inadequate to supply our ever-growing demand. Loop feeds are not provided and there are no switching stations. The Ida County Rural Electric Cooperative has installed voltage regulators on both of our substations and still experiences occasional low voltage.

Average consumption of our members has increased from 82.5 kilowatt-hours in April 1945 to 376 kilowatt-hours in April 1950 and 455 kilowatt-hours in April 1951.

The power companies have said many times that they will provide any necessary transmission facilities but for 12 years they have made no improvements in our service.

I have received a number of letters from members requesting that funds be provided the Bureau of Reclamation for the purpose of providing us with dependable and adequate transmission facilities. These letters have been turned over to Senator Guy M. Gillette.

In Iowa we have worked with the private utilities and municipalities to the end that much has been accomplished in good working relations. That should not be interpreted to mean that transmission lines by the Bureau should be excluded from the picture but rather that they should be included for the betterment of electric service to all.

POWER FROM MISSOURI RIVER BASIN PROJECT

Mr. PULLEN. Mr. Chairman, my name is Charles L. Pullen, and I am manager of the Ida County Rural Electric Cooperative, in northwest Iowa.

I am a member of the power study committee for that group, and have also worked with this power group, and I am on the policy committee for the Iowa State association.

Our feeling would be very similar to that of the rest of them.

The use of electricity on the farm has increased so rapidly that it has kept most of us almost dizzy for the past 10 or 15 years since we have been working with it.

I think in Iowa we have somewhat established the precedent of solving many of our problems through cooperation with the private utilities and the municipalities and the REA's working together.

We do feel that the lines of the Bureau of Reclamation would help us a great deal in solving those problems further, and we feel a little bit that they have been handicapped because of lack of funds in helping us to solve the problems.

Senator HAYDEN. Thank you, sir.

Senator HUMPHREY. Now, Mr. Chairman, we have Mr. J. Mauritz Nelson, who is secretary of the board of directors of the Rural Cooperative Power Association. Elk River, Minn.

STATEMENT OF J. MAURITZ NELSON, SECRETARY, BOARD OF DIRECTORS, RURAL COOPERATIVE ASSOCIATION, ELK RIVER, MINN.; MANAGER, KANDIYOHI COOPERATIVE ELECTRIC POWER ASSOCIATION, WILLMAR, MINN.

TRANSMISSION LINES, MINNESOTA

Senator HAYDEN. Mr. Nelson, your statement that you have submitted to the committee will appear in full in the record at this point, and you may proceed to high light it as you desire.

Mr. NELSON. Yes, sir.

(The statement referred to is as follows:)

STATEMENT OF J. MAURITZ NELSON, SECRETARY OF BOARD OF DIRECTORS, RURAL COOPERATIVE POWER ASSOCIATION, ELK RIVER, MINN., MANAGER, KANDIYOHI COOPERATIVE ELECTRIC POWER ASSOCIATION, WILLMAR, MINN.

Mr. Chairman and gentlemen of the committee, my name is J. Mauritz Nelson of Willmar, Minn. I am secretary of the board of directors of the Rural Cooperative Power Association of Elk River, Minn. I have been a member of the board of this association for 12 years, or since the cooperative was organized. I have also been the manager for the past 13 years of the Kandiyohi Cooperative Electric Power Association of Willmar, Minn., which serves 3,000 farm families.

I am here in behalf of the power association and six member distribution cooperatives which depend on the association for electric power. These distribution co-ops are: Rural Cooperative Power Association, Elk River, Minn.; Anoka Co. Cooperative Light & Power Association, Anoka, Minn.; East Central Electric Association, Braham, Minn.; Kandiyohi Cooperative Electric Power Association, Willmar, Minn.; Mille Lacs Region Cooperative Power & Light Association, Aitkin, Minn.; North Pine Electric Cooperative, Inc. (part), Finlayson, Minn.; Wright Hennepin Cooperative Electric Association, Maple Lake, Minn.

These six cooperatives now bring electric service to 23,017 farms and other establishments. When their planned construction is completed, they expect to serve about 40,000 consumers.

Our generation and transmission cooperative started operation in 1940 with one power plant. It had a capacity of 3,700 kilowatts. The increase in power requirements of our members and the lack of an adequate source of power necessitated the construction of five additional plants. The total system generating capacity now is 43,000 kilowatts.

We respectfully request that funds be provided the Bureau of Reclamation to construct lines and substations and other facilities as shown on the attached map. Since these lines are contemplated by the Bureau in its ultimate system, we are requesting that construction be advanced several years, thus making it possible to integrate the stand-by capacity of our cooperative with other power cooperatives to alleviate the power shortages of 16 distribution cooperatives in southwestern Minnesota. These 16 co-ops serve 70,000 consumers.

Worth-while economies, as well as a more adequate power supply, would result from the advance construction program.

1. Sufficient stand-by capacity now is available in the vicinity of the proposed lines to assure the 16 cooperatives adequate power until energy is made available from the Missouri River dams. Making use of the present available stand-by capacity precludes the necessity of installing additional generating capacity.

2. The integration of generating stations, which the proposed lines will effect, will enable the power cooperatives to utilize idle stand by capacity. Thus the most can be made of the generating facilities we now operate.

3. Marketing studies show conclusively that the proposed advance construction will ultimately be required to distribute the power generated in the Missouri Basin. The Rural Cooperative Power Association proposes to purchase firm and secondary energy from the Bureau of Reclamation. We estimate that delivery to us of 45,000 kilowatts of energy over the lines under consideration would mean an annual savings of $450,000 to our members. This estimate is based on the present cost of production. For our cooperative system to receive

this quantity of power, Bureau substations would be required at Hawick and Maple Lake. The cooperative would rent these substations and the line from Benson to Maple Lake until hydro power is available from the Missouri Valley.

POWER FROM MISSOURI RIVER BASIN PROJECT

Mr. NELSON. My name is James J. Maurtiz Nelson, and, as Senator Humphrey said, I am the secretary-treasurer of the Rural Cooperative Power Association.

I am also manager of the distribution cooperative, which is known as the Kandyohi Cooperative Electric Power Association, located at Willmar.

The first-named is the generating co-op, which was organized or created of necessity, and now serves 24,000 members throughout central and eastern Minnesota, and our distribution co-op serves close to 3,000 members.

This distribution cooperative was formed shortly after our Congress passed the Rural Electrification Act, but our members were still further denied electric service for an additional 2 to 3 years due to lack of either sufficient power or power at a rate that was a rate that the farmers or the members could afford to pay.

The two sources of power were a municipality, which is city of Willmar, and the Northern States Power Co.

We have a letter in our files back at Willmar, over the signature of the vice-president of the power company, wherein they refused to serve our local distribution co-op. That was back in the days of organization.

I just mention that knowing that you have and you will hear to the contrary, that power companies have never ever refused.

They also mention that they have sufficient power. I have a letter, which I want to quote a small part of. It is a letter from the Northern States Power Co. under date of February 26, 1947. It is from the Minneapolis office of the power company. I just want to mention the part that pertains to our co-op and another neighboring co-op under a joint contract:

> When we entered into the electric service contract of December 15, 1945, it was agreed that your cooperative and the Stearns Cooperative would not impose a combined demand on our system in excess of 1,100 kilowatts maximum demand. This load has now increased to some 1,590 kilowatts, which is greatly in excess of what we originally agreed to supply. And since the continuance of this large load tends to impair the service to our other customers in this area as well as that received by your cooperative, it is necessary that steps be taken forthwith either to reduce the combined load or to arrange for taking part of this service from the company system at some other point. Therefore, while we regret the necessity for doing so, we must advise that if the load at Eaton Valley is not reduced and if the difficulties caused by such continuance result in an outage on the company's system, it is unlikely that we will be able to restore service for your use.

This letter is signed by the vice president of the Northern States Power Co.

I just read that letter because I think you full well realize the uncomfortable situation it places an operator of a system in, not knowing that he is going to have this electric power, which is absolutely necessary, from one day to the next.

Mr. WOLTER. Mr. Chairman, I would like to call a concluding witness for a short word, Mr. Victor Hanson.

STATEMENT OF VICTOR HANSON, MANAGER, AGRA LITE COOPERATIVE AND WESTERN MINNESOTA POWER COOPERATIVE, BENSON, MINN.

TRANSMISSION LINES, MINNESOTA

Senator HAYDEN. I notice you have presented a prepared statement to the committee, Mr. Hanson. We will just insert the statement at this point in the record, and you can proceed to highlight it.

(The statement referred to is as follows:)

STATEMENT OF VICTOR HANSON, MANAGER, AGRA LITE COOPERATIVE AND WESTERN MINNESOTA POWER COOPERATIVE, BENSON, MINNESOTA

Mr. Chairman and gentlemen of the committee, my name is Victor Hanson. I am manager of Agra Lite Cooperative and of Western Minnesota Power Cooperative, both with headquarters at Benson, Minn. I have served both organizations as manager since they began operating in 1939 and 1948, respectively.

I appear here in favor of a proposal for advance construction of certain Bureau of Reclamation transmission lines in Minnesota.

Western Minnesota Power Cooperative was formed in 1940 for the purpose of developing a source, or sources, of power for eight REA distribution cooperatives in western Minnesota. Agra Lite Cooperative is a member of WMPC.

To date, only one cooperative Diesel power plant has been built in this area. It is located at Benson, and it serves Agra Lite exclusively. It was built in 1948. It had to be built in order to provide a source of power for more than 4,000 farmers that would otherwise have been without power. Two suppliers that had furnished power up to that time could not continue to do so due to ever-increasing demands on their own systems. I refer to the Otter Tail Power Co. and the Benson municipal plant. Both systems were overloaded to such an extent that use of power had to be drastically curtailed.

The cooperative Diesel plant at Benson has an installed capacity of 6,525 kilowatts, of which 5,220 kilowatts is firm power. The plant is satisfactorily serving the purpose for which it was built and is meeting the expectations on which it was developed. However, due to its remote location with respect to fuel oil supplies, freight costs are high for delivery of fuel. This results in comparatively high generating costs.

Agra Lite Cooperative, by reason of the existence of this plant, does have a firm supply of power adequate to meet its needs for the next 2 or possibly 3 years. However, this power plant can be of much greater value to the farmers in western Minnesota if it is integrated in a power pool such as is now under consideration by—

(1) Serving as peaking capacity for the large steam plants in the Dairyland, Rural Power, Minnkota, Central North Dakota, and Iowa generating systems; and

(2) By reason of such integration, making available for use 1,305 kilowatts of generating capacity which must otherwise be held as stand-by capacity.

If a power pool is formed by advance construction of Bureau of Reclamation transmission lines, as proposed by the North Central Cooperative Power Development Committee, the large steam plants, which are located where coal for fuel can be delivered by barge transport, or are close to the great lignite coal fields in North Dakota, can be base loaded to their full capacities.

Power generated under these conditions can be delivered in the Benson area at a substantially lower cost than it can be generated locally by Diesel operation, as we are presently doing. The results would be (1) substantial savings in power costs for Agra Lite; (2) conservation of fuel oil; (3) helpful relief to the critical situation that exists in rail transport of fuel oil due to shortage of tank cars; and (4) most economical operation and widest possible use of existing generating capacities.

We respectfully request, therefore, that you give favorable consideration to the proposal for the advance construction of these Bureau of Reclamation lines.

We also want to go on record as being strongly opposed to an amendment to the Department of the Interior appropriations bill (H. R. 3790), known as the Keating amendment. This amendment, if enacted into law, will seriously cripple efficient delivery of power generated at federally owned, hydroelectric plants to cooperative power distribution systems, including the cooperative I represent.

POWER FROM MISSOURI RIVER BASIN PROJECT

Mr. HANSON. Mr. Chairman and gentlemen, my name is Victor Hanson. I am manager of the Agra Lite Cooperative and Western Minnesota Power Cooperative, Benson, Minn.

We have a small Diesel generating power plant there that was built to meet the needs of the farmers in our immediate area.

The municipal plant at Benson, from which we originally purchased power, could not continue to serve our load. In fact, our load now has doubled the capacity of the power plant at Benson; that is, the muncipal power plant.

So far as we are concerned in our immediate cooperative, we do not have a power problem as of today. We have got generating capacity to see us through for a couple of years, but we are going to have to increase that capacity if this other source of power through this pool arrangement that we are talking about does not come about.

We can also help that pool to some extent with the reserve capacity that we have there in the immediate future.

The cost of power in our area is very high due to the fact that fuel costs are high. We would have savings of $8,000 to $9,000 a month on our power bill alone. If we could avail ourselves of lower cost hydropower that will be coming in, we would have those savings.

We are sitting just next door, just across the line from the State of South Dakota, and we should like very much to participate in the lower cost hydro power that is being developed out there.

Thank you.

Senator HUMPHREY. Mr. Chairman, I want to tell you how grateful all the witnesses are, and I personally for the courtesy that you have extended to us. We know we have gone far over the time. You have been most charitable and generous. We are not going to ask any more of our people to testify.

I did think it might be nice if they just would stand so you could see them. I want you to see the kind of people we have in Minnesota, and then we will get out of here.

We also have a couple of fine men from Iowa. Mr. Paul Richter from Wadena, Minn.

STATEMENT OF PAUL RICHTER, MANAGER, TODD-WADENA ELECTRIC COOPERATIVE, WADENA, MINN., AND BOYD CONLEY, PRESIDENT, TODD-WADENA ELECTRIC COOPERATIVE

TRANSMISSION LINES, MINNESOTA

Senator HAYDEN. Mr. Richter.

Senator HUMPHREY. Will you just stand up, Mr. Richter?

I am sure your story is pretty much the same as the others.

Mr. RICHETER. Yes, sir.

Senator HAYDEN. Your prepared statement that you submitted to the committee will appear in full in the record at this point, Mr. Richter.

Mr. RICHTER. Thank you, sir.

(The statement referred to is as follows:)

STATEMENT OF PAUL RICHTER, MANAGER, TODD-WADENA ELECTRIC COOPERATIVE, WADENA, MINN., AND BOYD CONLEY, PRESIDENT, TODD-WADENA ELECTRIC COOPERATIVE

Mr. Chairman and gentlemen of the committee, 1. The cooperative in the area is now being supplied by Minnesota Power & Light Co. This company has its main steam plant located at Duluth, Minn., approximately 150 miles distant, and its principal hydroelectric generation facilities in the immediate vicinity.

2. The Duluth area has been considered a vulnerable area in the event of military aggression. In the case of attack, it is almost positive that generating facilities of the Minnesota Power & Light Co. will be a prime military target because they serve the iron ore industry which is the heart of the defense effort.

3. The proposed Bureau of Recalamtion transmission lines, together with the pooling possibilities they would create, would serve as a major protection to guarantee continued electric service to the Tood-Wadena Electric Cooperative, surrounding muncipalities, and the entire northeast agricultural and iron range area of Minnesota.

4. The cooperative is now serving a military establishment which requires approximately 300 kilowatt demand and over 600,000 kilowatt-hours per year. An alternate source of electric power would be essential to assure continuous service to this establishment.

5. The Todd-Wadena Electric Cooperative paid $87,000 in 1950 for its wholesale power. Under proposed Bureau of Reclamation rates, a saving of $45,500 would have been made.

We urgently request the subcommittee to give its approval to the request of the Bureau of Reclamation for the building of the transmission lines in this area.

Senator HUMPHREY. Mr. Earl E. Huber, counsel, of the Traverse Electric Cooperative, Wheaton, Minn.

STATEMENT OF EARL E. HUBER, COUNSEL, TRAVERSE COOPERATIVE, WHEATON, MINN.

TRANSMISSION LINES, MINNESOTA

Senator HUMPHREY. I believe your testimony is pretty much the same as the others, Mr. Huber.

Mr. HUBER. Yes.

Senator HAYDEN. The statement you have submitted to the committee, Mr. Huber, will appear in full in the record at this point.

Mr. HUBER. Thank you, sir.

(The statement referred to is as follows:)

STATEMENT OF EARL E. HUBER, COUNSEL, TRAVERSE ELECTRIC COOPERATIVE, WHEATON, MINN.

Mr. Chairman and gentlemen of the committee, my name is Earl E. Huber. I am counsel for the Traverse Electric Cooperative of Wheaton, Minn.

Presently our cooperative power system includes 1,600 miles of distribution lines serving 2,500 rural consumers living in 54 townships.

We are short of power. Our wholesale supplier, the Otter Tail Power Co., has refused our requests to increase our supply at our four substations. And to make sure that we do not use more than our contract specifies, the company imposes a 50-percent penalty on power we might use over the amount stated in the contract. This is in the face of a demand charge of $2.25 per kilowatt. We pay on an average of 17 mills for our wholesale power.

Our cooperative now is receiving power at several substations without benefit of contracts with the supplier. We have been unable to come to terms with the company on a basis that would provide our co-op with an adequate and dependable supply of power at a price we can afford to pay.

Traverse Electric Cooperative has been subjected to frequent outages due to inadequate equipment on the part of our wholesale supplier, and thus causing dangerous and expensive breakdowns of milking machines, hatching and brooding equipment, and other farm equipment.

We plead with you for funds to construct Bureau transmission lines.

STATEMENT OF S. C. MARTENSEN, MANAGER, LYON-LINCOLN ELECTRIC COOPERATIVE, TYLER, MINN.

TRANSMISSION LINES, MINNESOTA

Senator HUMPHREY. We also have Mr. Martensen, manager of the Lyon-Lincoln Electric Cooperative, of Tyler, Minn.

Mr. Martensen, would your testimony be the same?

Mr. MARTENSEN. It is the same story.

Senator HAYDEN. Your prepared statement, Mr. Martensen, will also appear in full in the record at this point.

Mr. MARTENSEN. Thank you, Mr. Chairman.

(The statement referred to is as follows:)

STATEMENT OF S. C. MARTENSEN, MANAGER, LYON-LINCOLN ELECTRIC COOPERATIVE, TYLER, MINN.

Mr. Chairman and gentlemen of the committee, I am Sig. Martensen and I have been manager of Lyon-Lincoln Electric Cooperative at Tyler, Minn., since it was first organized. We serve about 2,500 farm families on over some 1,400 miles of line in southwestern Minnesota.

In support of the plan to bring power into our area by Bureau of Reclamation lines from the Missouri River dams, I wish to submit an account of our efforts to secure adequate low-cost power in the past and also explain our situation as it is at present.

In 1940, when our first section of line was being built, we had difficulty finding anyone who would sell us power. A contract with the city of Marshall was finally negotiated, but in 1945 that source proved to be inadequate. Another contract was then signed with Otter Tail Power Co. Both contracts were such that even with a possible decrease in fuel costs our average cost of energy would be 10 to 11 mills per kilowatt-hour.

This arrangement was in effect until in 1949, 2 years ago, when Otter Tail Power Co. succeeded in increasing its demand charge to the extent that we have paid them some months as high as 18 mills per kilowatt-hour.

The city of Marshall is now asking us to reduce our load and to pay more for the power we buy from them. The contract they propose will result in a cost somewhat similar to our costs with the power company.

To secure the additional needed power, we are now negotiating with Northern States Power Co., and may be forced to sign a contract with them which is no less objectionable. In addition, we must spend a lot of money to build transmission lines and a substation in order to use this power.

Our load has grown and is growing so fast that we will soon need two additional substations in the area now being served from the one substation on the Otter Tail Power Co. line.

Our average cost of power in 1950 was 16 mills, which we understand is about double that being paid on an average by REA-financed electric co-ops.

Even more serious than the costs is the fact that the municipal plant, as well as the transmission lines of both power companies, are now loaded to the extent that we know they cannot furnish us enough power in the years to come.

We know that many other cooperatives in our area are having similar difficulties and that the Bureau of Reclamation has the answer as soon as it is permitted to proceed with construction of the transmission lines now being proposed by the cooperatives.

The board of directors of our cooperative asked me to go to Washington to appear before this committee and register its unqualified support of the proposed plan in accordance with a resolution adopted by the members of the co-op assembled in annual meeting.

STATEMENT OF BERTSEL BROWN, DIRECTOR, PLYMOUTH ELECTRIC COOPERATIVE POWER ASSOCIATION, OF LE MARS, IOWA

TRANSMISSION LINES, IOWA

Senator HUMPHREY. We also have with us Mr. Bertsel Brown, director of the Plymouth Electric Cooperative Power Association, of Le Mars, Iowa.

Mr. Brown, we Minnesotans kind of took up the time.

Is your story pretty much the same?

Mr. BROWN. Yes. We are all very busy and the farmers are all overloaded. We simply got to have that electricity in a short time, because the farmers have the milking machines in the wintertime and electric fountains and that. It is just essential to have it.

It is almost impossible without it. I know myself, in our house we have an oil furnace and we have to have electricity or we will freeze.

Senator HAYDEN. I notice you have submitted a prepared statement, Mr. Brown. Your statement will appear in full in the record at this point.

Mr. BROWN. Thank you, sir.

(The statement referred to is as follows:)

STATEMENT OF BERTSEL BROWN, DIRECTOR OF PLYMOUTH ELECTRIC COOPERATIVE POWER ASSOCIATION OF LE MARS, IOWA

Mr. Chairman and members of the committee, my name is Bertsel Brown, and I am a director and the president of the Plymouth Electric Cooperative Power Association of Le Mars, Iowa, and also director on Northwestern Iowa Cooperative Power Association, consisting of 12 REA cooperatives, and also director, vice president, and adjuster of the Farmers Mutual Insurance Association of Plymouth County, Iowa, and township trustee of Johnson township in Plymouth County, Iowa.

The Plymouth Electric Cooperative Power Association has gone on record as being opposed to the various amendments which have been passed by the House of Representatives wherein and whereby various appropriations have been removed from bills pending before that body, taking away funds and moneys which were intended to be used in the erection and construction of transmission lines from the Missouri River Valley projects to the various loads of power. This cooperative has gone on record and is opposed to the so-called Keating amendment whereby no funds could be used by the Bureau of Reclamation or the Rural Electrification Administration for the erection and construction of transmission lines or generation plants.

That postage-stamp rate of the Bureau of Reclamation will deliver electric power to substations of the cooperative and municipalities for 5.5 mills per kilowatt-hour.

Dump power will be available to power companies, municipalities and generating cooperatives at approximately one-half of that price.

That savings to all of the people of Iowa would amount to several million dollars per year; and that savings to members and farmers of Plymouth County alone would be approximately $80,000; and that savings to members of Northwest Iowa Power Cooperatives would amount to more than one-half million dollars per year.

That this cooperative has installed voltage regulators on all three substations, and still experiences occasional low voltage.

That the manpower on the farms in Iowa has been seriously depleted because of the draft and other war activities, and that as a result thereof there is an acute shortage of farm help, and that unless electrical power, in sufficient and steady amounts, is furnished to the farmers of Iowa, the Iowa farmers cannot produce crops in sufficient quantities, and they will not be able to operate and work the farms which they are now farming and trying to operate, unless steady, constant,

and sufficient current is furnished them so that they have full use of all of their electrical equipment.

We would like to draw your attention to the fact that we think the Bureau of Reclamation should have appropriate money for the building of transmission power lines from the dam site to northwest Iowa and southern Minnesota forming a loop to carry power to the REA co-ops in that territory. We do not see any reason why the private utility companies should be allowed to capitalize on power generated at a Government-built dam built and operated by taxpayers' money.

STATEMENT OF MARVIN SUNVOLD, MEMBER, BOARD OF DIRECTORS, RENVILLE SIBLEY COOPERATIVE POWER ASSOCIATION

TRANSMISSION LINES, MINNESOTA

Senator HUMPHREY. Then we have Mr. Marvin Sunvold, from the Renville Sibley Cooperative Power Association, at Danube, Minn.

Mr. SUNVOLD. At the present time we have adequate power, but our load is increasing.

We just talked about it the other night and we got to take a new load study of our system to find out what will be used. It is increasing by about 10 percent every year.

Senator HAYDEN. Your statement will likewise appear in the record in full, Mr. Sunvold.

Mr. SUNVOLD. Thank you.

(The statement referred to is as follows:)

STATEMENT OF MARVIN SUNVOLD, MEMBER, BOARD OF DIRECTORS, RENVILLE SIBLEY COOPERATIVE POWER ASSOCIATION

Mr. Chairman and members of the committee; my name is Marvin Sunvold. I am a member of the board of directors of Renville Sibley Cooperative Power Association. Our headquarters are located at Danube, Minn. Our distribution system serves 2,015 farm families in Renville and Sibley Counties.

The members of our cooperative are deeply worried about an attempt that is presently being made in Congress to stop construction of Bureau of Reclamation transmission lines. I refer to the Keating amendment to the Department of the Interior appropriations bill (H. R. 3790) as passed by the House of Representatives. If this amendment is left in the bill and becomes law, it will effectively isolate our cooperative from receiving low-cost hydroelectric power from the Missouri River power plants except as the private utility companies may, or may not, have capacity in their lines to wheel such power to us. Inasmuch as wheeling contracts that private utility companies enter into with the Bureau of Reclamation only commit them to deliver such amounts of power to Bureau customers as their line capacities may permit after their own needs are met, we would be at a serious disadvantage in trying to avail ourselves of Bureau power under such an arrangement. We therefore want the Bureau to build such transmission lines into Minnesota as will be needed to deliver hydro power to preference customers in those portions of the State that lie within the area that the Bureau can serve.

It is our opinion that the Keating amendment would deny us, and other preferred customers for the Bureau power in Minnesota, from participating in the advantages that have been made available to such cutomers in many other parts of the country. This would be a drastic departure from the public power policies that have been developed by Congress, and it would be discriminating against many people who have, through the years, supported the development of our public power resources.

Since the advent of electric power on the farms in my community, and this is true of farms throughout the country, we farmers have developed the use of electricity to so many productional uses that a constant and adequate supply of power has become a matter of great importance. In fact, most of us would be unable to carry on our work in producing dairy and poultry products without a firm supply of electric power. Our use of electricity is rising rapidly. We must look to our future needs in the light of our present experience. This means that a power supply that is barely meeting our needs today will be very inadequate tomorrow.

If our farmers in Renville and Sibley Counties are going to have adequate power in the future, they must have, and certainly are entitled to service from Bureau of Reclamation transmission lines that will have capacities enough to deliver energy to them as their uses for electricity develop and expand.

STATEMENT OF EDWARD G. BROWN, JR., LAWTON, IOWA

TRANSMISSION LINES, IOWA

Senator HUMPHREY. Then there is Mr. Edward G. Brown, Jr., from Woodbury County, REA, at Lawton, Iowa.

Mr. BROWN. We are fixed on power now, but we need to have more. We are right next to the river power, which will cut our costs to our individual farmers.

Senator HAYDEN. I notice you have also filed a prepared statement with the committee, sir, and your statement will appear in full in the record at this point.

Mr. BROWN. Thank you, Mr. Chairman.

(The statement referred to is as follows:)

STATEMENT OF EDWARD G. BROWN, JR., LAWTON, IOWA, MAY 31, 1951

Mr. Chairman and gentlemen of the committee, my name is Edward G. Brown, Jr., of Lawton, Iowa. I am not a farmer but an apiarist who operates 1,800 colonies of bees for the production of honey and for the pollination of seed crops and horticultural crops in western Iowa. I am a director of the Woodbury County REA, representing 2,100 farm families; chairman of the Lawton Telephone Cooperative Association of Western Iowa, representing 2,000 families; representative of the director, Mr. Vern Wendel of Northwestern Iowa Power Cooperative, which cooperative is serving 12 rural electric cooperatives in western Iowa, which, in turn, are serving 25,000 farm families.

We are in need of Bureau of Reclamation appropriations to continue the Bureau lines from Sioux City, Iowa, to Omaha, Nebr.; from Sioux City to Humboldt, Iowa; from Humboldt to Creston, Iowa; and from Humboldt to Mankato, Minn.

We are in favor of the 10-percent cut of the Bureau of Reclamation, but we do not favor the removal of any complete power lines to get this cut.

We in western Iowa are in need of river power to be delivered to all sections of western Iowa for public use, as we are paying the taxes on these river dams. The private power companies have never built a line to a co-op substation in our area, but most substations have been placed near these lines.

I am definitely opposed to the Keating amendment, and that amendment should be stricken from the appropriations bill, as we need the electric power on our farms to replace hired help that is not available, and also to replace the farm boys that are now entering the service of the Armed Forces of the Nation.

STATEMENTS SUPPORTING TRANSMISSION SYSTEM

Senator HUMPHREY. Thank you, Mr. Chairman.

If we have not impressed you now, I am afraid we are not persuasive.

Senator HAYDEN. We also have statements here that were submitted by Mr. C. L. Palmetson, manager, Blue Earth-Nicollet Cooperative Electric Association, Mankato, Minn.; Mr. George Comstock, president of the Federated Rural Electric Association, Jackson Minn.; Mr. Charles H. Carl, manager, of the Nobles Cooperative Electric, Worthington, Minn., and Edgar R. Mackie, electrical engineer, associated with the engineering firm of Ellerbe & Co., St. Paul, Minn.

Their statements will be printed in full in the record at this point.

Senator HUMPHREY. Thank you, Mr. Chairman.

(The statements referred to are as follows:)

STATEMENT OF EDGAR R. MACKIE, ELECTRICAL ENGINEER, ASSOCIATED WITH THE ENGINEERING FIRM OF ELLERBE & CO., ST. PAUL, MINN.

Mr. Chairman and gentlemen of the committee, my name is Edgar R. Mackie. I am an engineer employed by the firm of Ellerbe & Co. of St. Paul, Minn. I am appearing here today in behalf of 16 REA-financed cooperatives in southern and western Minnesota.

Ellerbe & Co. is the largest engineering organization in Minnesota. We have been doing load study and system design work for REA cooperatives in Minnesota and surrounding States for many years. We made the preliminary studies and the complete system design for Minnkota Power Cooperative at Grand Forks, N. Dak. This is one of the largest and most successful of the REA power cooperatives. Work connected with REA is less than 10 percent of our total annual business. We now have work in more than 20 States. The above statements are made only to give an indication of our qualifications to prepare the information contained herein.

Ellerbe & Co. made the engineering studies for the 16 cooperatives in the south and western areas of Minnesota. Their present requirements are supplied by four private utilities and 13 municipalities. A critical shortage of power and transmission facilities exists in the area.

The municipalities in the area have done a fine job of helping the development of the REA cooperatives which they supply. The rapid increase in load experienced by the cooperatives, however, has caused the generating facilities of all but three of the 13 municipals to be seriously overloaded. In many instances the REA load has become greater than their own load. It is not feasible for them to float a bond issue to install additional capacity to carry the REA loads. Seven of the municipalities have already requested that they be relieved of the necessity of carrying their REA loads. In most cases they are required to run every available unit of generation regardless of condition just to get by. For example, the municipal plant at Sleepy Eye lost one unit in November of 1950 which resulted in 3,200 REA members being out of service. They have served notice of cancelation of their contract with the REA cooperative.

The Ottertail Power Co. serves the northwestern portion of this area. That company has served notice to REA cooperatives it cannot supply additional substations as more farms are served and as more load develops. It has refused to sign new contracts and, by so doing, has removed the only available supply of power. The company's power shortage is so critical that it has served notice to some REA cooperatives that its present demand charge of $2.25 per kilowatt will be increased 50 percent for substations covered by existing contracts if the load exceeded present contract limits.

Our study further reveals that even if power were available the company's low-voltage transmission system is not adequate to carry the loads involved. The loads now being carried by this utility are so much beyond the efficient capacity of its facilities as to result in many cases of wide fluctuations of voltage and the cooperatives still have members who cannot be connected because of the lack of power.

The Interstate Power Co. serves the southern portion of the area. The cooperatives of this area are handicapped by the lack of adequate transmission facilities. A large portion of the lines owned by this company in this area is in the 24-kilovolt class. The company has indicated its willingness to do the best it can with these facilities, but it has placed low limits on the amounts of power that can be supplied to a given location.

The Minnesota Power & Light Co. serves only four substations in this area.

Two of the member cooperatives are supplied by REA-financed generating plants.

The Northern States Power Co. serves the balance of the area. This company, being the largest of the four utilities involved, is naturally in the best position to serve its portion of the requirements. However, like the others, Northern States designed and built its systems before the REA cooperatives came into being. Our studies indicate that the company's system is not capable of carrying the anticipated loads without major revisions in transmission facilities and the installation of additional generating capacity.

Our letter addressed to the four utilities and dated August 28, 1950, clearly indicates our problem and requests information on what quantities of power could

be made available to us. We have received no answer to this letter from any of the utilities to whom it was sent.

The cooperatives have realized for some time that they were rapidly reaching the limit of the available power supply. With this in mind, and at the insistence of the cooperatives, we undertook a study and analysis of their power problems.

We have completed this study. The study shows beyond any reasonable doubt that the demand for power already exceeds, and will rapidly outdistance, the existing available supply. This situation must be corrected at once, if the development of these cooperatives is not to be restricted.

Our study further shows that the most practical and feasible solution to the over-all problem is to provide these cooperatives with Bureau of Reclamation power from the Missouri Basin. The only reasonable solution is to place the Bureau lines in operation at the earliest possible date.

We do not feel that such a solution would cause any of the utilities to suffer any loss from the facilities that they now own. By their own statements, their existing transmission facilities are inadequate and by their own statements, they do not now have the needed generating capacity. The proposed power pool would relieve them of the necessity of installing this generating capacity. The installation of the Bureau lines would relieve them of the necessity of a major revamping of their transmission systems. We know of no other solution to this problem with so many benefits to all.

It is only through the Bureau facilities that an over-all power pool can be created into which all generating capacities of REA co-ops, municipalities, and utilities can be put together for the benefit of all.

These 16 cooperatives purchased approximately 180,000,000 kilowatt-hours in 1950 at a cost of approximately $2,430,000. By 1960 they will purchase 450,000,000 kilowatt-hours annually and at present rates they would pay $6,075,000. If their 1960 requirements are made available by the Bureau, they would pay approximately $2,700,000. This would result in a saving of $3,375,000 per year to the cooperatives.

With the Bureau lines in the area, the power supplied by the power pool can be distributed to the load centers of the individual co-ops by lines which the co-ops propose to build with REA loan funds. This phase of the transmission problem is further described in the attached communication from the Administrator of REA.

I believe the solution we propose is sound, effective and desirable to 180,000 rural families in the Minnesota area. The Government investment, in my opinion, would be repaid in full.

MARCH 1, 1951.

Mr. GEORGE OLSON,
Chairman, Power Development Committee,
St. James, Minn.

DEAR MR. OLSON: We have reviewed the loan application submitted by Western Minnesota Power Cooperative and Southern Minnesota Power Cooperative to provide electric service to 16 rural distribution cooperatives in western and southern Minnesota. It is our understanding that your basic proposal is as follows:

1. A loan in the amount of approximately $11,000,000 is requested to construct 1,286 miles of subtransmission lines and related substations in southern and western Minnesota to deliver power to member cooperatives which will be purchased initially from a power pool consisting of Southwestern Federated Power Cooperative, Inc., Corn Belt Power Cooperative, Rural Cooperative Power Association, Western Minnesota Power Cooperative, Border Counties Power Cooperative, Inc., Minnkota Power Cooperative, Inc., Central Power Electric Cooperative, Inc., and Dairyland Power Cooperative, and later power will be delivered to the member cooperatives by the Bureau of Reclamation.

2. One organization (hereinafter called the "borrower") consisting of the 16 rural distribution cooperatives is to be formed.

3. In order to integrate the power pool and effect an interconnection of existing power cooperatives with a total installed capacity of approximately 370,000 kilowatts, the Bureau of Reclamation is to construct approximately 1,050 miles of high voltage transmission lines and related substations, in advance of the availability of Missouri Basin power, to be built from funds appropriated by Congress for fiscal 1952.

4. A license is to be granted by the Bureau to permit the use of the transmission system when constructed upon payment by the borrower of an annual rental

charge. Such rental charge shall be based upon the proportional use that the borrower makes of the Bureau facilities with operation and maintenance work to be done by the Bureau. The license shall continue in effect until power is available from Missouri Basin projects. Thereafter, the Bureau is to assure delivery of power to the member cooperatives.

5. Borrower is to grant to the Bureau a license to be effective when Missouri Basin power becomes available for the use of the subtransmission facilities to be financed by the proposed REA loan to the extent necessary to supply requirements of member cooperatives and to others to the extent that there may exist from time to time surplus capacity in the subtransmission lines. The Bureau shall be obligated to use the subtransmission lines to serve member cooperatives. The subtransmission lines are to be operated and maintained by the Borrower and, in consideration of the license the Borrower is granting to the Bureau for the use of subtransmission lines the Bureau is to pay a wheeling charge of not less than one mill per kilowatt-hour for all electric energy transmitted over the subtransmission lines.

6. It is our understanding that the cost of power delivered to the member cooperatives prior to the availability of Missouri Basin power will be approximately 13.7 mills per kilowatt-hour. After the availability of Missouri Basin power (which is expected to be in 1954) the cost of power to the member cooperatives will be approximately 6.6 mills per kilowatt-hour.

A review of the proposed plan indicates that—

1. It will positively assure the availability of an adequate supply of power to the borrower's 16 member cooperatives as soon as Missouri Basin power becomes available.

2. It will result in substantial savings in power cost to the member cooperatives upon the availability of Missouri Basin power and will result in smaller savings prior thereto.

3. It will effect an interconnection of 8 power cooperative systems with a generating capacity of 370,000 kilowatts which will permit the pooling of reserve generating units now maintained separately by each thus resulting in substantial savings in investment and critical materials.

You have indicated that the present power suppliers in the area do not now have adequate facilities to distribute Missouri Basin power to the member cooperatives in the quantities desired and that they have not submitted definite proposals setting forth any plan that assures the delivery of Missouri Basin power to the member cooperatives. Of the major suppliers, it is our understanding that the Otter Tail Power Co. has informed the cooperatives it serves that it would not be in a position to continue to make generation and transmission capacity available for our borrows. You also have advised us that many of the 13 municipalities serving member cooperatives have requested them to obtain other sources of power, since they cannot continue to supply the ever-increasing requirements of the member cooperatives due to the magnitude of the rural loads compared to their own requirements. You indicate that you also requested proposals from all of the power suppliers in letters dated August 28, 1950, and that to date you have received no proposals. In the absence of any proposals from these suppliers, we concur with your conclusion that there is no assurance of the delivery of adequate low-cost power to the member cooperatives from existing suppliers.

It is our understanding that the 8 existing generating cooperatives will be able to make available sufficient capacity to supply the power requirements of the borrower's 16 member cooperatives until Missouri Basin power becomes available in 1954. We also understand that, on the basis of the engineering studies submitted, the existing power cooperatives will be able to supply power to your members by using the reserve units of each power cooperative without the necessity of additional loans by REA for generating facilities for the purpose of supplying the borrower's 16 member cooperatives.

As you know, we have not had sufficient time to complete the formal engineering and financial studies required prior to the final approval of a loan for the construction of the subtransmission lines. Similarly, there has not, as yet, been a definitive examination of the legal aspects of the loan proposal by the Solicitor's Office and such examination must necessarily await full crystallization of the loan proposal. You also are aware that we make this type of loan only where no adequate and dependable source of power is available in the area to meet the needs of the member cooperatives or where the rates offered by existing power sources would result in a higher cost of power to the member cooperatives than the cost from facilities financed by REA. Subject to the foregoing, it appears that we shall

be able to give favorable consideration to your application for funds to construct subtransmission lines and related substations; provided, that—

1. The Bureau of Reclamation is able to proceed with construction of the transmission system in the immediate future.

2. Satisfactory contracts are entered into with the Bureau of Reclamation and existing power cooperatives embodying the features of the proposal referred to above.

3. Borrower will assume all existing loan obligations of Western Minnesota Power Cooperative.

4. Satisfactory 35-year power contracts are executed by the borrower with each of the 16 member distribution cooperatives.

Sincerely,

_____,
Administrator.

STATEMENT OF CHARLES H. CARL, MANAGER OF THE NOBLES COOPERATIVE ELECTRIC, WORTHINGTON, MINN.

Mr. Chairman and gentlemen of the committee, my name is Charles H. Carl and I have been manager of the Nobles Cooperative Electric at Worthington, Minn., for the past 3 years.

This cooperative purchases its power, for resale to its members, from the Northern States Power Co., Interstate Power Co., and the city of Worthington, Minn.

Our cooperative system consists of 1,700 miles of distribution lines serving 4,000 rural families.

The supply of power in certain sections of our area is becoming increasingly critical. Our power requirements are increasing rapidly, and judging from present conditions it is extremely doubtful that our ultimate load could be served by the present facilities in our area.

The voltage at our substations varies considerably due to the suppliers' lines being overloaded at peak-load hours.

Service to some four substations is interrupted frequently because of the run-down condition of the lines which supply them. Outages caused by line failures last as long as 4 or 5 hours.

Our rate for purchased power, we believe, is excessive. It costs us between 12 to 15 mills per kilowatt-hour. The cooperative furnishes all substation structures, transformers, and any line switches needed by the supplier to serve our substations. This adds to our cost of power.

When Bureau of Reclamation power is made available to our co-op, an estimated savings of $75,000 a year in wholesale power costs alone would result, not to mention other benefits to the members in having better voltage regulation and more reliable service.

STATEMENT OF GEORGE COMSTOCK, PRESIDENT OF THE FEDERATED RURAL ELECTRIC ASSOCIATION, JACKSON, MINN.

Mr. Chairman and gentlemen of the committee, my name is George Comstock, president of the Federated Rural Electric Association, with headquarters at Jackson, Minn.

We operate in, and serve, areas of Martin and Jackson Counties, Minn. I have been president of our association since 1936 with the exception of several months in our early history. During this period I have seen our association grow from just a hope a few of us had 15 years ago until now, when we are serving 4,154 members along 1,773 miles of line. When our system is finished, we expect to serve 4,500 members.

We have been plagued for many years by a serious power shortage. To secure power for our system we had contracts with six sources, namely, two sources on the Interstate Power Co. lines, one from Fairmont municipal power plant, one from the Jackson municipal power plant, one from the Lakefield power plant, and one from the Windom municipal power plant. The sources at Windom, Lakefield, and Jackson were very weak. In two sources our load was surpassing the municipal plants' own distribution load. The power from Jackson and Lakefield was mostly interruptable power; that is, power available only when all units were in operating condition. There were times when the REA switch was pulled at the plants when equipment failed—and our members were in the dark. I recall one

winter a couple of years ago when, from 4:30 p. m. until 6 p. m., various sections of our lines had to be cut off so that the load would not exceed the capacities of the sources.

This type of operation is serious and our members complained severely about these conditions.

It affected cooking, water supply, brooding, and so forth. It was right at milking time, too. The Interstate Power sources were very weak. During storms we have had to send our crews out on their lines to help repair them.

Prices for power were exorbitantly high. We paid the Windom, Minn., municipal plant 24 mills per kilowatt-hour and the Lakefield plant varied from 15 to 19 mills per kilowatt-hour. These high prices forced us to raise our retail rates to our members.

We repeatedly tried to find or develop a solution to this problem. The municipal plant at Fairmont was very cooperative and installed additional capacity to take care of our immediate load in Martin County. The municipal sources in Jackson County were not interested in increasing their capacity to take care of our load as it would require indebtedness on their part.

We are serving several small incorporated villages on a wholesale basis. This developed through acquisition of the properties of the Martin County Electric Co. which were substantially rural. One wholesale account—Dunnell, Minn.—was acquired when the Martin County Electric Co. advised the town that it could no longer serve the town and disconnected its service.

The power contracts offered us by the Interstate Power Co. contained a clause requiring us to resell the power received from them to the ultimate consumer only. Technically this would have forced us to disconnect the towns of Ceylon, Dunnell, and Round Lake, Minn., which are wholesale accounts. These towns have no other available power sources and disconnecting them would have been ridiculous. Therefore, we could not enter into this contract.

Finally, after considering all of these factors, our members at our annual meeting voted to construct a generating plant. Application was made to the Rural Electrification Administration for loan funds to construct a generating plant to serve the portion of our system which the Fairmont municipal plant could not serve. This loan was approved by REA due to the fact that natural gas was available for fuel which would give us a tremendous saving in power cost, plus giving us a dependable source of power in Jackson County.

This new plant went into operation in July 1950; already the load has grown to the point where our present generating equipment is loaded beyond the limits which good operating practice would prescribe. Our power cost from the Fairmont source for January 1951 was 14.3 mills per kilowatt-hour while our generation cost was 10.1 mills. This rate, in the month of January, saved our members $4,100, or a saving of about a dollar per member.

I mention the foregoing as a matter of history and to give an indication of the power problems being faced by the individual cooperatives. The load is growing at a tremendous rate. In 1947 we used 8,000,000 kilowatt-hours and in 1950 we used 16,000,000 kilowatt-hours. We are attaching charts No. 5042–2 and No. 5042–1 prepared by Pfeifer & Shultz, registered professional engineers of Minneapolis, showing our total consumption in kilowatt-hours, peak demand in kilowatts, number of connected customers, and average yearly consumption per member. These charts show past experience and predict the future growth.

With such load growth in connection with the electrification of the farms it is indeed a difficult problem to know where future power will come from. As manpower becomes scarce due to drafting for military service, more electric equipment is required to offset this condition. And power will have to be supplied to the farms if peak production of the food America needs is to be maintained.

Because of these conditions we sincerely request your consideration so that we may assure our members adequate power at a reasonable cost. This can only be provided by the development of transmission lines by the Bureau of Reclamation as presently proposed.

STATEMENT OF C. L. PALMERSTON, MANAGER BLUE EARTH-NICOLLET COOPERATIVE ELECTRIC ASSOCIATION, MANKATO, MINN.

Mr. Chairman and gentlemen of the committee, I represent nearly 4,000 farm families in the heart of Minnesota, one of the highest electric-consumption areas in our Nation. These people have become dependent on electric service in their farming operations. Their consumption has increased to the point that our power suppliers are hard put to keep up with the demand, let alone stay ahead of it.

Much of our system is not served by loop circuits, thus decreasing its dependability.

In 1950 our wholesale power costs amounted to 41 percent of our gross income. This reflects clearly the high price we are paying for power.

Our cooperative is extremely desirous of getting Bureau facilities and power in the area for the following reasons:

1. Bureau facilities provide the only means of creating a power pool in the area.
2. Bureau facilities will save millions of dollars of investment for generation and transmission equipment on the part of co-op generating plants, municipalities, and utilities.
3. The Federal Government can make this saving possible by investing public funds and be repaid with interest.
4. By this procedure people in the entire area can be benefited by either lower rates or faster repayments of moneys borrowed and still at no loss to the Government.
5. Bureau facilities will give the highest guaranty of continuous service than various pooling arrangements that are made possible.

Senator ELLENDER. May I say, Mr. Chairman, that as to this question of impressing us, the Senator knows how both of us feel about this.

But we have a problem in sending a proposal of this kind to the whole committee without a budget estimate. That presents a difficult problem at times. But we will do our best.

Senator HUMPHREY. We know that it is a problem and, as I said earlier, I have explained that to our friends.

Thank you so much.

Senator HAYDEN. Mr. Knowles, you have been waiting patiently for 2 or 3 days. Will you come forward now, please, sir.

OFFICE OF THE TERRITORIES

ALASKA PUBLIC WORKS

STATEMENT OF B. L. KNOWLES, ENGINEER, REPRESENTING ASSOCIATION OF GENERAL CONTRACTORS, WASHINGTON, D. C.

LIMITATION ON FORCE-ACCOUNT CONSTRUCTION OF ROADS

Mr. KNOWLES. My testimony will be very brief, Mr. Chairman.

I am engineer of the Associated General Contractors of America, which is an association with which I think you gentlemen are familiar. It has about 6,800 members all over the country.

My testimony has reference to the force-account construction activities of the Alaska Road Commission.

I appeared in March before the subcommittee of the House Appropriations Committee, to comment upon the fact that the Alaska Road Commission has been spending about 50 percent or more of its construction appropriation by force account, rather than by contract.

We have in Alaska a substantial chapter of contractors perfectly competent to do this construction work, and we can assure the road commission of plenty of bids so that the competition there will be very keen on its construction work.

I don't have to tell this committee anything about the uneconomic characteristics of force-account work. The committee has demonstrated its understanding of that in limitations that have been put on to the Bureau of Reclamation's force-account activities.

AMENDMENT REQUESTED

But we feel that 50 percent of the appropriation for roads in Alaska spent on force account is too much, and we objected to it.

In response to our objections, the committee had put a paragraph in the bill:

> Not to exceed 25 percent of the amount appropriated herein for construction of roads in Alaska shall be available for construction work by force account or on a hired-labor basis.

That is what the committee gave us. But I had presented to the committee a paragraph which we recommended and which I would like to read to you. They saw fit not to approve this paragraph I shall read, but to give us this other instead. This is our paragraph, as suggested:

> No part of any construction appropriation for the Alaska Road Commission contained in this act shall be available for construction work by force account, or on a hired-labor basis, except for management and operation, maintenance and repairs, engineering and supervision, pioneer roads into uninhabited areas, projects through areas of undetermined or unstable geological conditions, routine minor construction work, or in case of emergencies, local in character, so declared by the commissioner of roads for Alaska.

Now, this paragraph, as we prepared it, was worked out in collaboration with Colonel Noyes, the road commissioner of Alaska, and I would like to explain just one or two points about that.

Pioneer roads into an uninhabited area have the difficulty of mapping and surveys are almost unknown in many of those areas. They are projects through areas of undetermined or unstable geological condition.

Alaska has what is known as permafrost in the soil. It never thaws out entirely at any time. When a survey of a road is made and the specifications are drawn over this permafrost country, if there is a warm day or two, the depth to which excavation may have to be made is likely to change. That brings about a very difficult situation, from the engineer's point of view.

This paragraph that we recommended gives, we believe, a little more latitude to Colonel Noyes, the road commissioner. We have a great deal of confidence in Colonel Noyes. He is a former member of the Corps of Engineers. He is thoroughly convinced of the economy of the contract system, and we believe that this paragraph would be a little more liberal to him and would allow him a little more latitude.

Senator HAYDEN. Do you think the 25-percent limitation is too tight; is that it?

Mr. KNOWLES. No, I don't think it is too tight. But I don't think it gives him the latitude he might have some difficulty in holding to that in some instances.

I think that if in this paragraph there were a definite limit put on it, that 20 percent would be better.

But there is another reason, Mr. Chairman, why we prefer our paragraph to theirs, and I will be perfectly frank about it: the 25 percent is high. I think the percentage should be higher in Alaska than it is for the Bureau of Reclamation, but if a definite percentage is specified in this bill, I will be perfectly frank to say we are fearful that some of the other bureaus might seize upon it, and say, "Well,

you gave 25 percent to the boys in Alaska. Why don't you give it to us instead of 12 percent?"

We don't think that would be right. We think we should have this percentage in Alaska.

Senator HAYDEN. Up to now there has been no limitation, has there?

Mr. KNOWLES. No limitation whatsoever.

Senator HAYDEN. And you would want to see how it works for a year in the manner in which you have suggested?

Mr. KNOWLES. We would.

I might say that Colonel Noyes called me up a few days ago just after he testified, I think, before your committee. I have not seen or heard his testimony, but he said to me—

> Knowles, I have read your testimony before the House committee and I am entirely in accord with it, and I am more ready to support the paragraph that you recommend and I hope you will back me up in it when you get up before the Senate committee.

That is all I have to say, Mr. Chairman, and thank you very much.

Senator HAYDEN. Thank you, sir.

BUREAU OF MINES

CONSERVATION AND DEVELOPMENT OF MINERAL RESOURCES

STATEMENT OF DERSO SHYBEKAY, PROFESSIONAL ENGINEER, FELLOW OF THE SOCIETY OF ENGINEERS OF GREAT BRITIAN; PRESIDENT OF THE INDUSTRIAL RESEARCH COUNCIL OF AMERICA, AND THEIR OPERATING AGENCIES

REQUEST FOR REDUCTIONS IN RESEARCH ACTIVITIES

Mr. SHYBEKAY. Mr. Chairman, I would be glad to add something very important to the Minnesota delegation's report, which will satisfy Senator Ellender.

My name is Dr. Derso Shybekay, registered professional engineer, president of the Industrial Research Council of America.

I have here a prepared statement which I would like to include in the record.

I would like to talk about another case of electric power in Minnesota.

We have in Minnesota, Mr. Chairman and members of the committee, seven and a half billion—please do not be mistaken on it—not million, but billion—metric tons of peat. We made a survey out to generate electric power from peat. Here is one of my papers.

At the end of the paper I have the cost estimates. For a 25,000-kilowatt plant the cost is $3,800,000. The production cost per unit is 85 cents.

I think, Senator Ellender, that answers your questions.

Senator ELLENDER. What does that mean in mills per kilowatt-hour?

Mr. SHYBEKAY. That would be 0.12.

I will tell you something, Senator, which is not known by the committee.

Peat has byproducts, and the utilization of byproducts is so enormous—they can produce from peat, carbon black, magnesium—that the cost of the electric power will be negligible.

Senator ELLENDER. Is that the same kind of peat as you have in Ireland?

Mr. SHYBEKAY. Yes. We did the job in Ireland. We built electric plants in Ireland, in Port Leighise. I am one of those engineers who were very active on this thing.

Now, there is another very important question which I would like to point out to the committee. We have in the United States 80 billion metric tons of taconite. Taconite is low-grade iron ore. I would like to point out the importance of using domestic sources of iron ore when we are so short in steel.

In my testimony, I am giving you a detailed report of the reasons for using taconite. Taconite and peat are twins. If I am able to generate power from peat, the utilization of taconite will be economical and feasible.

SUPPORT OF TRANSMISSION LINES

I would like to say to the committee that I am wholeheartedly for this $7 million which is being asked, because there should be built some plants generating power from peat.

I would like to point out one thing, gentlemen, which is also history: having only hydroelectric plants is very hazardous and dangerous.

STAND-BY POWER PLANTS NEEDED

During the last 5 years we learned from the history of Mexico, Spain, Italy, Portugal, that the hydroelectric power is not adequate. I agree fully with the Division of Power of the Department of the Interior that stand-by plants must be built if we would like to take care of the proper amount.

Senator HAYDEN. Let me suggest to you, sir, that so far as this committee is concerned, we may only make appropriations for projects that are previously authorized by law.

Mr. SHYBEKAY. I know it, sir.

Senator HAYDEN. Until the Congress authorizes the construction of plants that would utilize peat, we have no power in the matter at all.

Mr. SHYBEKAY. I know it, sir, but I would like to point out two things: The Bureau of Mines is asking an appropriation for lignite. My associates and myself built the power plant in Crookston, Minn., which is fully utilizing peat and lignite.

The appropriation which is in the bill should be cut in half about lignite.

Furthermore, there is an appropriation asked for oil shale. We believe the oil-shale project should also be cut in half.

I can quote you many, many statements from Oscar Chapman about the oil shale, that he wants to get rid of it, et cetera.

I think it should be known before the committee that he would like to get rid of those oil-shale plants.

You know that, Senator Ellender.

What is going on in the Bureau of Mines is something else. The Bureau of Mines does not want to get rid of those projects. But your Appropriations Committee should save money, and save money on lignite and oil shales for the research development of the two.

That is the reason I am here, sir.

Senator HAYDEN. We thank you for your statement, and your prepared statement will appear in the record in full.

Mr. SHYBEKAY. Thank you, sir.

(The statement referred to is as follows:)

My name is Dr. Derso Shybekay. I'm a registered professional engineer licensed in 29 States of the United States of America, some Provinces of Canada, Royal Fellow of the British Society of Engineers, president of the Industrial Research Council of America and their operating agencies.

As a professional engineer with much practical experience in the field of fuel technology, I am not alone in questioning the manner in which the Bureau of Mines operates today.

It is pertinent to point out here the opinion set forth by the House Subcommittee on Appropriations under the chairmanship of Hon. Michael J. Kirwan, Member of Congress, in its 1950 report to the House of Representatives. On page 174, the report stated:

"The material submitted by the Bureau of Mines in support of the budget estimates defies all efforts to ascertain comparative costs of the various activities which it is engaged in. The Bureau, in effect, presented narrative explanations of the various programs in which it is engaged and appended to such general statements an indication of the total funds desired. The committee cannot emphasize too strongly the inadequacies of the Bureau's budgetary submission covering these important activities."

This rather severe criticism of the Bureau of Mines is indicative of conditions which should not be tolerated in a Federal administrative agency which wields virtually life-and-death power over a vital part of our national economy.

I do not wish to go into the question of motives as to why we are so unfeelingly brushed aside by its fuel and mineral specialists with whom we are brought in contact. I prefer to stick to facts and figures. When it comes to questioning motives we would rather see that taken up on a much broader scale of congressional inquiry. I would like to confine my remarks to the following points:

1. According to 30V3, sections 3 and 4, the Bureau of Mines is charged with the responsibility of furthering research and development of peat and its byproducts. During the last 15 years, the Bureau of Mines has done nothing worth mentioning to fulfill their statutory obligations. Just the opposite happened. Everything was done to hinder the development of peat and its byproducts.

We have in the United States 15.5 billion metric tons of peat. How many important byproducts can be made from peat has been shown in numerous congressional speeches. Still nothing was done by the Bureau of Mines. Magnesium, carbon black, and acid acetates are some of the vital derivatives of peat which the country badly needs. They are still in short supply for public utility power. Yet the Bureau of Mines does nothing to support research and development of peat and such important chemical byproducts.

I enclose one of my publications to be appended to my statement showing what can be done with peat.

The usual explanation of the executives of the Bureau of Mines as to their lack of interest is that peat has 95 percent water. This explanation is 90 percent wrong. Actually only 10 percent of the Nation's peat resources contain 95 percent water. The bulk has not more than from 65 to 75 percent water. The information given out by the Bureau of Mines with respect to peat is distorted. Either its officials are misinformed or they are knowingly obstructing the research and development of peat and its byproducts.

2. My associates and I have been emphasizing the economic relationship between peat and taconite. As you perhaps know, taconite is the low-grade iron ore which abounds in the United States in such quantities as to make this Nation independent of overseas iron-ore sources for an inestimable period of time.

The development and use of taconite depends on low-cost electric power. It simply is not economically feasible to process taconite at prevailing public-utility rates in the region where the taconite is most plentiful. It so happens that the richest taconite deposits are adjacent to peat deposits. It is possible to generate electricity in power plants fueled by peat much cheaper than electric power can be produced by steam-coal plants in the taconite region. Peat and taconite are inseparable economic allies.

Yet the Bureau of Mines insists that electric power cannot be generated from peat. They proposed that a 5-year research program be undertaken to determine its economic feasibility despite incontrovertible data we submitted that the Irish built several electric plants generating power from peat and that more are under construction in Eire.

The same has been done in several other countries. We called attention to what the Russians are doing with peat. But the Bureau of Mines has brushed aside this data.

We have in the United States about 80 billion metric tons of taconite adjacent to our largest peat deposits, according to Dr. Boyd.

It is important to point out the support which the Bureau of Mines meanwhile has given to the major steel companies in obtaining certificates of necessity to process imported iron ore from Venezuela and Labrador. In extending its support in this direction favorable to the major steel interests, the Bureau of Mines has neglected the most obvious basic considerations such as:

(a) the lack of enough ships to supply the American steel industry with these foreign ores;

(b) the possibility of oversea supply routes being disrupted by enemy submarine attack, the defense of which would be costly and perhaps impossible;

(c) our failure to learn from history what happened concerning our oil interests in Mexico, other resources in Nicaragua and other countries, not to mention what is happening in Iran today;

(d) our failure to heed the several recent speeches of Mr. Pearson, Canada's Secretary of Foreign Affairs, touching on the dissension and friction which affects current economic relations between Canada and the United States;

(e) recent warnings by experts that the reliance of American steel companies on overseas ore deposits will inevitably result in the American taxpayer being asked to underwrite the cost of the ships required to bring in these Venezuelan and Labrador ores.

Lately some of these major steel companies have started work on taconite. At the same time, public utilities which are operating in the taconite region are seeking Government support for new power plants. It would not be surprising if this bid to furnish electric power to the steel companies at public utility rates were rejected. This in turn would give the steel companies an excuse that production costs are so high it is not economically feasible to develop taconite.

My associates and I have gone on public record that we will forego any profit and will carry out our program for the interrelated research and development of peat and taconite without any expense to the public if Government assistance is granted to give us a start.

The Bureau of Mines has ignored our proposal to put our technology to work in this strategic field of cheap and abundant fuel and iron resources.

3. The constructive purpose which underlies our interest in peat and its chemical and power byproducts holds out economic advantages that would redound to the public interest. We believe one of the main reasons for the existence of the Bureau of Mines is to lend its usupport to projects of that scope.

Our associates built a power plant in Crookston, Minn., generating electricity from lignite. When we started that project the Bureau of Mines had the same negative attitude they now hold with respect to peat and its byproducts.

We contend that much of what the Bureau of Mines is doing with regard to research and development of lignite is a wasteful duplication of what has been done before. We believe that its lignite program should be cut in half and the remainder allotted to a program for developing peat and taconite along the lines we have mentioned.

Furthermore, millions of dollars have been appropriated to support the costly, complex oil-from-coal methods favored by the Bureau of Mines and we still do not have a single commercial coal oil plant in the United States. We know well that more than half of Germany's oil supply in the latter stages of World War II was derived from coal. Yet after spending millions of dollars in going on from where the Germans left off, the United States Bureau of Mines has nothing but promises to show for these large outlays.

Time and again, I have heard top Government officials say, "We have to go by what our technical advisers tell us." Such unquestioning administrative blindness in our Federal technological agencies is hazarding our national welfare and security. It is holding back progress. Worst still it could take us all over Niagara in the same boat.

I flatly charge that the Bureau of Mines is withholding vital information about practical low-cost methods of making oil from coal which could made this country independent of the Middle East oil supplies. This statement can be documented out of data furnished by its own experts which it is now suppressing.

The critical situation with respect to Iranian nationalization of Britain's oil possessions in that country; the fact that the United States is now consuming as

much petroleum as it used at any time in World War II; the development of jet-powered aviation which uses roughly five times as much fuel as piston-powered planes—all these factors emphasize that it is perhaps later than we think.

I respectfully suggest that the appropriations for lignite and synthetic liquid fuels be reexamined with an eye to proper reductions and that some of the money saved thereby be used for the research, development, and utilization of peat and its byproducts and taconite.

We urge, too, that consideration be given to the idea that certificates of necessity be granted first to small- and medium-sized business enterprises which use domestic raw materials. We believe that if large monopolistic interests wish to hazard our economy by relying almost exclusively on foreign sources of raw materials they should not have priority over users of domestic raw materials.

4. There are many and rather serious complaints how small- and middle-sized business is mishandled by certain governmental agencies; to mention a few the Defense Mobilization Administration, Defense Minerals Administration, NPA, etc. The most complaints are concerned with the difficult forms, blanks, and the handling of several governmental employees of those businessmen. Every professional industrial engineer agrees that there are very few more inefficient organizations in the United States. The most obvious solution against such pushing around and, as it is said commonly, "kissing out" handling is—

(a) all the applications should go through a preliminary handling. If, through the preliminary handling, it is ascertained that the application has value and interest for the public and it is warranted, a so-called Preliminary Certificate of Necessity be granted. Such will enable the applicant to go around to try to get a loan from those official and private agencies which handle such cases, try to obtain the machinery and raw materials needed, and to all those steps which are needed to build the plant he wants;

(b) all such cases after the Preliminary Certificate of Necessity is granted shall go to a Board. Not to be handled by one (often overburdened, busy, impatient, often not an expert) man, but by a committee in which all those governmental agencies which must handle the case are represented. They should ask the questions they want and get the needed information orally. Red tape, lengthy correspondence makes the Government unpopular and cases very seldom get settled. If people can talk and give information, everybody will be much more satisfied instead of getting complicated, hard-to-answer letters;

(c) such will save considerable money, because there will be no plays and delays and pushing around;

(d) we, registered professional industrial engineers, will be glad to work out the details without any charge to the Government.

We do not understand why the Bureau of Mines and the Defense Mineral Administration is so much afraid to listen to experts. Maybe Congress will awake them to handle properly the people and those who have to deal with them officially.

Peat—An Excellent Source of Power

(By Dr. Derso Sebeok Shybekay, registered professional engineer, president of the Industrial Research Council of America, executive vice president of the Peat and Byproducts Council of America)

(1) It should be the policy of the United States of America to utilize as far as possible the national resources of the country. The United States of America has 15½ billion metric tons of peat, and it is a pity that practically nothing is done to utilize such a vast and valuable resource. It was denied that peat is usable for generating electricity. Some short-sighted, quasi scientists called it "fantastic" that peat could be utilized for such purposes. Now it is a reality and many foreign countries do it successfully. There is no doubt anymore in the minds of real engineers that peat-fired electricity stations can be erected.

(2) Here is a program on how to do it successfully. Naturally, local situations demand certain deviations, but not in the main question and merits. It is advisable to build such a plant close to a river. In the main building the boiler plant, the steam-driven generators, the control room, and the general offices for the operating staff should be housed and close to it shall be a high hyperbolic concrete cooling tower. For that about 30 acres are needed.

(3) Behind the powerhouse and straddled by a bridge crane a fuel store capable of holding, according to the needs, peat which is needed. A single-track narrow-

gage railway circling the fuel store and passing between it and the main building shall connect the station with the bog. To the left of the powerhouse, an outdoor transformer station to raise the voltage is suggested. Beside the river a pump house shall provide "make-up" water for the reservoir in the base of the cooling tower.

(4) The peat, which is machine-run and also air-dried or dried with specially designed drying devices if needed, is directly delivered from the bog to the station in steel trucks usually holding each 5 tons of fuel. On arrival to the station the peat is weighed and sample taken for analysis and determination of moisture content. It is then directly fed to the boilerhouse bunkers or stockpiled in the compound for future use. In the latter case, the contents of the trucks are unloaded in any part of the yard storage area by means of electric bridge crane. This crane lifts each full truck off its bogie, carries it to the required area, tilts the truck to allow a hinged door at the end to open automatically and thus discharge the peat. The truck is then returned to its bogie. If the fuel is required for the boilerhouse bunkers, the trucks are run directly to the boilerhouse and unloaded in a similar manner by two jib cranes on the roof of the boilerhouse. The peat is discharged into one of the three bunkers which serve the three boilers immediately under them. How many loads of peat are required to fill the bunker depends on the plan made for operations.

(5) Each of the steel bunkers in which the peat is stored converges at the bottom to a vertical drying shaft which guides the peat down to the combustion chamber of the furnace. As the peat descends through the shaft, hot air is blown through it to reduce further moisture content, and this enables the peat to burn more readily. When the peat enters the combustion chamber of the furnace, it passes on to a slowly moving chain grate stoker, where combustion takes place. The residual ash falls from the grate at the back of the chamber where it is collected in hoppers. The ash which is in the form of clinkers, similar to those resulting from coal burning, is then crushed and removed by mechanical devices to an ash disposal plant which cools the hot ashes and discharges them into wagons for removal from the station or eventual utilization as a byproduct.

(6) Built above and around the furnace is an intricate arrangement of water tubes fed from a steam and water drum. The drum collects the saturated steam and the steam is passed through a superheater and raises the temperature. The steam is delivered at the higher temperature and at a higher pressure to the turbine which drives the electric generator.

(7) The successful utilization of these high moisture fuels has resulted, entirely, from a complete realization and development of the benefits derived from the utilization of preheated air at extremely high temperatures.

The preheated air so obtained is used as primary air at three points:

(a) Direct introduction to the primary air supply of a pulverizer.

(b) Direct introduction into the fuel bed of a forced draft traveling grate stoker.

(c) Primary air admission circumferentially and rotationally at various levels in the furnace of a forced-draft traveling grate stoker-fired boiler, in order to provide for effective secondary air application to volatiles.

These principles have served beneficially to offset the deterrent effect of moisture in respect to the phenomenon of ignition. Fortunately, after the moisture content has been sufficiently offset by high preheated air temperature admission, further problems of combustion are usually not too difficult, provided means are furnished for effective utilization of volatiles generated at a rapid rate from the fuel bed.

(8) Through the medium of this radiant-air preheater, approximately 25 percent of the total air for combustion is secured as primary air which primary air is admitted as follows:

(a) Through a group of flattened spatulated air admission nozzles, admitting highly preheated air direct to the incoming peat.

(b) As a secondary air admission approximately 8 feet above the grate surface, this air admission being arranged around four sides of the furnace, using nozzles so designed as to provide a clockwise circumferential spin with reference to the axis of the flame.

(c) A third group of nozzles approximately 14 feet above the fuel bed, designed for air admission on the basis of a circumferential counter-clockwise spin with reference to the main axis of the flame.

This air admission is effected through the utilization of an over-fire air fan which has sufficient capacity for approximately 25 percent of the air required for combustion, at static discharge pressure of approximately 30-inch water

column. Experience has shown the feasibility of penetrating the flame mass for the purpose of directing secondary air admission to the core of the flame, this being required for shortening flame length and for effective burning of volatile gases.

(9) Remaining air required for combustion is released through air compartments of the forced draft traveling grate stoker, this preheated air being derived from the conventional heat recovery air preheater installed behind the boiler heating surface. These primary air preheaters use the primary air so obtained, at very high temperatures, for the following purposes:

(a) For direct admission to the fuel for the purpose of immediately reducing moisture content at the point at which the fuel enters into the firing equipment.

(b) For the purpose of admitting highly turbulent air at high static pressure, at secondary air into a conventional furnace, for the purpose of effectively consuming hydro carbons released within the furnace.

High temperature in connection with low grade fuel is noted as a catalytic agent, materially accelerating the process of ignition, to an extent not characteristic of the lower preheated air temperatures, the benefits of which are rapidly counteracted by the high moisture present in these fuels.

The use of highly preheated air at temperatures of 750 and even 800 degrees Fahrenheit completely alters the characteristic behavior of the fuels within furnaces of the conventional type. Chemical reactions are rapidly accelerated and the limitations imposed by high moisture content and corresponding low B. t. u. content are quickly eliminated.

(10) In connection with our discussion of the design of radiant-air preheaters, it is entirely possible that we may not have sufficiently stressed in the earlier part of this report, the significant advantages of heat absorption by radiation.

Heat is absorbed by radiation, in accordance with the Stefan-Boltzmann Law, as the fourth power of the abolute temperature. In a furnace having an averaging temperature at the level at which the radiant air preheater is installed of approximately 1800 degrees Fahrenheit, corresponding to 2260 degrees Fahrenheit absolute, heat will be absorbed by the radiant-air preheater surface, at the rate of approximately 40,000 B. t. u. per square foot of radiant heat absorbing surface per hour. The radiant heat absorbing surface may, with sufficient accuracy, be assumed to be equal to the semiperimetrical surface of all radiant-air preheater tubes exposed within the furnace limits. Under these conditions, a relatively small amount of radiant air preheater surface will permit of securing 20 percent to 30 percent of primary air at the elevated temperatures indicated, such radiant-air preheater surface being ordinarily installed in the front wall of the furnace, being spaced alternately with respect to water wall tubes. An existing installation has been made along these lines.

It is necessary to observe the rapid ignition effect produced in connection with high preheated air temperatures to realize the value of such a device and the significance of its use in connection with the utilization of low grade fuels.

(11) The generating plant is built according to the needs and steam turbine driven alternator sets are used. In the steam turbine the heat energy of the steam is changed into mechanical energy by allowing the steam to expand while passing through rows of steel blades which are rotating in opposite directions. These rows of turbine blades are attached to discs each of which is carried on a steel shaft coupled with alternating current generator on each side of the turbine. In the steam turbine the steam is exhausted into vacuum made by condensing the steam and this almost doubles the amount of work which the steam can otherwise do. The steam is condensed by abstracting its latent heat by means of large quantities of cooling water pumped through the condenser. The condensed steam returns to the boilers as feed water. The cooling water is cooled by circulating it through the cooling tower before it passes back to the condenser to repeat the process.

(12) If there is no possibility to obtain the amount of water needed, it becomes necessary to reduce by means of a cooling tower the temperature of the water returning from the condensers making again available for cooling purposes. From the condenser the cooling water is pumped through a riser shaft in the center of the cooling tower. It then passes out through radial feed pipes which spray the water into the air before it falls over wooden laths into the pond in the base of the tower. In falling the droplets and spray of water are met and cooled by a rising column of cold air, which is induced into the base of the tower by the chimney effect of the tower itself and the rising current of warmed air. Only a negligible amount of water circulated through the tower is lost by evapora-

tion and this is easily replaced by water pumped from the close river. A pump house shall be also erected on the bank of the river for such purposes.

(13) The output of the generators is taken through circuit breakers to the busbars located in the main building, with the exception of a very small proportion taken to the busbars through step-down transformers for the purpose of driving motors supplying lighting and heating for the station. Almost all of the electricity generated is conducted through underground cables to the outdoor transformer and switchgear compound. The output from the transformers is fed through circuit breakers to the main transmission line.

(14) The control room instruments show the load, voltage, frequency and other particulars of the generating plant. In addition, the switchgear and transformers are remotely controlled from here. The control room can establish direct contacts with other main stations by means of telephone. So the control room is always in a position to regulate the output as circumstances require.

(15) The laboratory does complete chemical analysis, controls the moisture content, calorific values of the fuel used and makes suggestions for pricing the results. The laboratory also controls the treatment of the feed and boiler waters, also to prevent that no scaling takes place inside the boilers and that no rusting or other damage occurs which would reduce efficiency or availability. Turbine lubricating oil checks, checks of the transfeormer and switch oils are also the job of the laboratories.

(16) Estimated costs:

For a 25,000 kilowatt plant	$3,850,000.00
Cost per kilowatt installed	$150.00
Estimated peat consumption per annum ..... tons	120,000
Estimated production cost per unit	$0.85

(17) The data show that peat use for generating electricity is feasible and most economical. Why not do it? What is the reason for neglecting such a valuable national resource?

The schematic diagram showing the use of peat for the generation of electricity is enclosed.

Utilization of Peat and Byproducts

(By Dr. Derso Shybekay, president Industrial Research Council of America, registered professional engineer)

Utilization of peat and byproducts is becoming from hour to hour more and more important.

The United States of America has 15½ billion metric tons of peat, and, now, as raw materials are becoming rapidly short, we need desperately to look for sources which are domestic and easily available. Peat is such a nature-given source, and we must know how we can develop and utilize it for the benefit of the country, national defense, safety, and security.

The research resulted in the following concrete results of application—peat and byproducts can be used as:

(1) Fertilizer, or soil conditioning material—utilized in crop production, both agricultural and horticultural, for stimulating growth, regulating moisture, supplying organic humus, and increasing basic exchange.

(2) Litter material—utilized for poultry and domestic animals.

(3) Insulation materials—utilized in home and industrial construction.

(4) To explosive manufacturers who use a low ash, highly absorbent peat to combine with nitro-glycerine in making dynamite and gunpowder.

(5) To distillers who smoke malt over peat fires to impart flavor to Scotch-type whisky.

(6) To boxboard manufacturers to mix with wood pulp in making paperboard products.

(7) To fertilizer manufacturers as an organic carrier for concentrated fertilizer ingredients and to prevent such mixture from caking.

(8) To plant growers as an insulating, moisture-holding, lightweight, low-cost packing material.

(9) For fuel.

(10) Peat was used extensively during World War II in the production of magnesium.

(11) Cork substitutes.

(12) As a filler for linoleum.
(13) As a part of rubber compounds.
(14) For the manufacture of fiberboard.
(15) For the manufacture of cardboard.
(16) For the manufacture of paper and newsprint.
(17) As a carrier in insecticide dust for airplane dusting.
(18) For the manufacture of carbon black.
(19) For the making of activate carbon.
(20) For the manufacture of porous, lightweight brick, tiles, and cement blocks.
(21) Filter beds for sewage sludge and industrial wastes.
(22) For sound-proofing.
(23) For gas purification.
(24) As a deoderizing absorbent.
(25) For sweeping compounds.
(26) As a carrier of molasses in stock foods.
(27) For the manufacture of metallurgical coke.
(28) For the smeltering and sintering of ores.
(29) For the manufacture of insulation board.
(30) To replace wood flour.
(31) As a low-cost effective preservative and packing material for storing and shipping eggs, fruits, and vegetables.
(32) For use in health building baths (the famous mud baths of Baden-Baden, Germany, are compounded from peat).
(33) As a source of leather-tanning extracts.
(34) As a source of material for molds from which antibiotic medicines are prepared.
(35) For medical extracts and compounds.
(36) For the manufacture of briquetted fuel (this fuel is extensively produced for both domestic and industrial use in practically all European countries possessing peat deposits).
(37) As an absorbent dedorant filler for mattresses to be used for infants and in hospitals.
(38) For the production of chemicals, dyes, waxes, oils, gases, acids, and other products almost beyond enumeration which can be separated from peat organic materials by various processes, such as distillation or solvent extraction.

It seems the time is right for our country to extend its field of research development and utilization of peat and its byproducts. Such research could not fail in attaining results of much in the public interest and in the interest of the taxpayers.

(39) Certain types of peat can be made an inexpensive source of sulfur, a vital element to the chemical, steel, and synthetic rubber industries.

(40) Possibly the biggest use of all in potential public welfare is as a fuel for electric power production in areas having peat deposits but no other low-cost fuel or power source. It is well known how extensively peat is used in Ireland, Holland, Germany, Denmark, Sweden, Norway, Austria, and in most of the iron-curtain countries for electric power systems based on peat and peat byproducts—even to the extent of furnishing sufficient electrical power for whole cities and electric railway systems.

We fervently hope that in due time it will be realized the danger and how hazardous are the hydroelectric plants alone. We most seriously urge that beside hydroelectric power at least 25 to 30 percent of the electric power plants must be steam power plants. The lessons and troubles of Italy, Portugal, Austria, and Germany must be a good lesson.

Furthermore, the success or failure of the development and utilization of taconite and so badly needed domestic low-grade iron ore depends entirely and utterly on inexpensive electric power generated from peat.

Utilization of peat removed from the soil will make lands usable and arable and ready for production of most valuable agricultural products.

BUREAU OF RECLAMATION

STATEMENT OF R. P. PARRY, ATTORNEY, REPRESENTING AMERICAN FALLS RESERVOIR DISTRICT, TWIN FALLS, IDAHO

MINIDOKA PROJECT, AMERICAN FALLS POWER DIVISION, IDAHO

AMERICAN FALLS POWER PLANT

Senator HAYDEN. All right, Mr. Parry.

Mr. PARRY. Mr. Chairman, my name is R. P. Parry, and I am an attorney in private practice in Twin Falls, Idaho.

I am here in connection with the proposed appropriation of $1,300,000 to start a power plant at American Falls, Idaho.

I represent the American Falls Reservoir district, which is a private district of about 500,000 acres.

I also represent the North Side Canal Co., which irrigates about 160,000 acres, and, at this hearing, the Twin Falls canal, which irrigates 200,000 acres, those latter two being privately built irrigation projects.

I also speak for a substantial number of the approximately 100 canal companies and irrigation districts which take water out of the Snake River in eastern Idaho.

That is the group for which I speak.

We think that to start in on this American Falls power plant which is a part of our over-all river development there at this time is a matter of poor timing, that it is an uneconomical use both of money and critical materials, having in mind the limited net gain in power that would be produced and that we are in effect starting on the tail of the kite rather than the kite.

I would just like to have a few minutes to give the picture from the irrigators point of view.

Senator HAYDEN. Are you sustaining the position that was presented to this committee by the Idaho Power Co.?

Mr. PARRY. Only partly. I was not here, but I read a transcript of the testimony.

Our objection is more to the timing of the development, and the order in which it is followed. Their objection, of course, is to it completely.

I do not disagree with any of the facts that Mr. Gale testified to, as I now remember them.

The situation is this: On the Snake River we have the Jackson Lake Reservoir, with 800,000 acre-feet, approximately, in Wyoming, on the upper end of the stream. We have the American Falls Reservoir, 1,700,000 acre-feet, and the lowest reservoir on the stream.

And there is the proposed Palisades Reservoir, which will be the middle reservoir, which has been authorized by Congress twice.

We have been working on the Palisades Reservoir for some 15, 16 years. It is a true multiple-purpose dam. It has a large flood-control benefit. In fact, there is an incipient flood danger there right now. I was over there a couple of days ago. It will furnish supplemental water to some three-quarters of a million acres of presently irrigated lands that need it badly in dry years. It will have an installed capacity of 112,000 kilowatts of power.

That project was authorized by the Congress first in 1941, subject to certain water-saving agreements being worked out. The war intervened.

We worked a long time on those water-saving agreements, and it finally culminated in a compact between Idaho and Wyoming last year.

As we neared the end of what I might call the reauthorization period it was decided that they would add to the over-all project the development of approximately 65,000 acres of new land down in the southern part of the State to be irrigated by wells, which would require electric power to pump. That was a new idea.

Then, as a last step, there were added on this proposed power plant at American Falls, which was proposed to produce power for pumping this water out of these wells.

Now, under the present administration program, the wells are not being appropriated for or built. That project is in suspension.

PALISADES PROJECT, IDAHO

The Bureau of Reclamation requested the Bureau of the Budget appropriation to proceed with the Palisades, and also with American Falls power plant. The Palisades appropriation was not granted by the Bureau of the Budget; the American Falls power plant was.

We irrigators think they should be reversed and we would like to have that money transferred over so that we could keep going on Palisades.

Technically, that might be a new project, but, actually, there has been spent up there—it is near the Idaho-Wyoming line—some $3 million. That has been spent partly in construction camp work.

There has been built a substantial part of the bypass road to go around the damsite up around the mountain, which is heavy construction.

UNUTILIZED TRANSMISSION LINE

A transmission line, a 115-thousand-volt line, some 55 miles long, running from a connection with the backbone line of the Northwest Power pool over to the damsite, is sitting there unused. It was to be used for construction purposes during the construction period of the project and then bring power out after the project was built.

The city of Idaho Falls operates a municipal plant and they are terrifically short of power to a great extent because that new atomic-energy development is in their backyard, and in Idaho Falls there has been established the headquarters office of that part of the AEC.

They are bringing in some 2,000 permanent families in the city of Idaho Falls, which had two small hydroelectric plants of its own and is struggling now with Diesel plants and is also buying a substantial block of power from the Utah Light & Power Co.

WHEELING CONTRACT

The city of Idaho Falls' municipal plant has entered into a contract with the bureau to take the 15,000 kilowatts of firm power to be produced at Palisades.

Just within the last few days we had a meeting of the water users out in Idaho, and they, through their committee, have agreed that if we

can go ahead with the Palisades Dam, that for the first 5 years after its construction, so long as there are defense needs, they will consent that it be operated so that it will produce, on a median year basis, 60,000 kilowatts to go into the Northwest Power pool where there is a shortage.

I will not repeat the testimony of Mr. Gale, which indicates that on the American Falls power plant there is not much net gain because there is just one flow of water, and it can only go through one plant at a time.

EFFECT OF IRRIGATION PROGRAM ON POWER

The thing with us is this: These large reservoirs are primarily irrigation reservoirs. So during the wintertime we have to stop the flow of the water and store it. That cuts down the firm power over the whole period of time.

The Palisades Reservoir is the middle one of the three steps, as I have mentioned, and we feel that it can be operated to produce power, a more firm and larger average power, because that water can, in turn, be caught at the lower reservoir.

Senator ELLENDER. How far is that Palisades site from the proposed power site at American Falls?

Mr. PARRY. About 110 or 120 miles.

Senator HAYDEN. Is it lower down?

Mr. PARRY. The American Falls is the lowest. In other words, there is the Jackson Lake Dam in Wyoming, and then we come down the Snake River approximately 100 miles, in round figures, and just over the Idaho line to the Palisades site.

Then down about 120 miles further is the American Falls Dam, that storage dam, and then the water is released in turn from that and comes down the river another 60 or 70 miles to irrigate the country where I live. The lowest diversion dam at Milner is there.

On an average year basis the Palisades would produce, according to the figures from the Bureau of Reclamation, 521 million kilowatt-hours, while this American Falls project would only produce about 38 million kilowatt-hours additional energy.

So if we look at it on an average year basis of contribution to the Northwest Power pool, on an area net gain basis, the Palisades plant is nearly 5 million kilowatt-hours superior. The net gain would not be large and that the cost per kilowatt would be high at American Falls power plant.

The cost per kilowatt is much lower at the Palisades Dam than it is down at American Falls. The allocated cost per kilowatt, again using certain of the Bureau figures, on a 1949 basis, at Palisades, is $245 a kilowatt, and on the same basis the cost at American Falls is $396.

So there is almost a 50 percent greater cost at American Falls.

Senator ELLENDER. Is that on a 1949 basis, too?

Mr. PARRY. That is on 1949, both the same.

I think both of those should be increased by 20 percent. That is my personal estimate, but you will still have the same relative difference there.

The whole point of our talk is, very frankly, that we think the place to keep going is Palisades Reservoir and that we are getting off on the wrong foot if we go down and start this American Falls power plant.

1952 BUDGET ESTIMATE

Senator HAYDEN. How much money is there in the bill?

Mr. PARRY. One million three hundred thousand dollars is requested and approved by the House for the American Falls power plant.

Senator HAYDEN. Is there nothing on the Palisades project?

Mr. PARRY. No.

TRANSFER OF FUNDS REQUESTED

Senator HAYDEN. Would you want the Senate to transfer that sum of money from one place to the other?

Mr. PARRY. Yes, Senator. We think it is a coordinated project altogether, and we are vitally interested in it. We would like to have that transferred.

Now, I suppose it is no shock to the Senators that we would like to have it increased some also, in order to get it going.

Senator ELLENDER. Was there a budget estimate for that?

Mr. PARRY. There is no budget estimate for Palisades.

Senator HAYDEN. The budget estimate is for the power plant at American Falls.

Mr. PARRY. The point I am trying to make is that it is an over-all river development in which the irrigators are primarily interested.

We don't like to get pushed out completely on some power controversy.

Senator HAYDEN. Would the money be spent for the same purpose, that is, would it be a power development at the other place?

Mr. PARRY. The Palisades is a true multiple-purpose project. It has power, flood control, and irrigation. As you build the dam you get all three up there.

Senator ELLENDER. Senator, one of the big differences is that, at the American Falls, it was pointed out that the slots had been left to create the power and it would cost a total of $6,600,000, whereas the Palisades project would cost $76 million.

Mr. PARRY. That is correct. It is an over-all dam there.

One of the problems, as we understand it, is to get some power into the Northwest power pool as rapidly as possible. As I pointed out, there would be a substantial increase on that in the Palisades Dam if it were used for that purpose.

AMERICAN FALLS-MINIDOKA LINE

There is no particular shortage of power in the lower river or on the Minidoka project site, for which this American Falls Dam is requested, and there will not be a need for that power unless and until all these 300 wells are drilled by the Bureau of Reclamation at some later date.

The private power company is serving all the needs down there now, including all of the wells of the Bureau of Reclamation.

There is a shortage of power up there in the Idaho Falls. That little municipal plant there needs power badly. They can get it out of the Palisades.

The Army engineers are spending money in there every year on levees on the river below Palisades Dam, which are just of a tempo-

rary nature. If we proceed in an orderly way on Palisades, we think we will accomplish the whole program.

Senator HAYDEN. At what location would you get the actual electric current produced at the earliest date?

Mr. PARRY. I believe that unless they put Palisades on a tremendously expedited basis, that the American Falls plant would produce it somewhat earlier.

I think perhaps they would get some Palisades power on the line at not a great deal later time.

Senator HAYDEN. The reason why I asked that question is that undoubtedly the Bureau of the Budget would not have authorized even the amount of money that they did unless it was assumed that the power would be quickly produced to meet the emergency.

Mr. PARRY. I think that is correct, Senator.

But I don't believe that the difference in time—and that is the point I am going to make—is sufficient to offset the much greater net increase in power that would result from building Palisades.

Now, then, there is a danger, among other things, of a loss to the Government if we are not allowed to go ahead with Palisades. That road work has been done up on the side of the mountain and if we just stop and go away—you know from your experience with these mountain roads—there will be slides and boulders and so forth, and that road will disintegrate.

The transmission line, in which well over a million dollars is invested, is sitting there unused, with all its critical material.

Likewise, this supplemental water that would be produced in Palisades is badly needed down there by the farmers at any time in the year when it gets a little bit dry. That will make the difference between good production and poor production on a large area of land.

I might say in closing that the irrigators think they have somewhat of a stake in this deal. When American Falls Reservoir was built the power company was in there and had been in there for years before.

AMERICAN FALLS RESERVOIR

They owned three small power plants and a diversion dam and flowage rights and various rights, and those were purchased and added to the cost of the American Falls Reservoir.

When American Falls Reservoir was built, the already constructed projects subscribed to about half of the space.

This irrigation district that I represent, the American Falls Reservoir district, paid the Government cash in advance before they ever stuck a pick in the ground. They paid approximately half of the estimated cost of that reservoir, and we paid 7 percent interest on the money borrowed to pay the Government.

The Government got its money right away and now, fortunately, those bonds are paid off.

The balance of the water in the reservoir has been used by various irrigators for some 20 years now, and I think I am correct in saying the payments are substantially current on all the sums due the United States.

So we think we have somewhat of a stake in this whole deal and we are most awfully anxious that the Palisades project not be allowed to deteriorate and the money already put in there lost. We think a real

good can be attained from about whatever angle you look at it, either for the immediate power needs of our city of Idaho Falls, where the atomic energy people are just pouring in on them, or whether from the point of view of a contribution to the Northwest power pool.

I believe that 521 million kilowatt-hours can be put into that Northwest power pool from Palisades, about as rapidly as any unit the same size in the Columbia River Basin.

We appreciate tremendously your giving me this opportunity to present this testimony.

Senator HAYDEN. Thank you, sir.

Mr. Littell.

BUREAU OF INDIAN AFFAIRS

STATEMENT OF NORMAN LITTELL, ATTORNEY, WASHINGTON, D. C.

INDIAN REHABILITATION PROGRAM

Mr. LITTELL. I am Norman Littell, attorney for the Navajo Tribe, speaking for the tribe supplementing the earlier request of the bureau, from the Bureau of Indian Affairs for the appropriations of this year.

It is carrying coals to Newcastle, as far as two of you members of the committee are concerned, to talk about this subject. You probably would know more about it than I do.

Nevertheless, I want to call attention to the fact that, as far as the rehabilitation program is concerned, the $88 million rehabilitation program authorized by Congress, as you know, and approved by the President in the spring of 1950, two very serious things have threatened somewhat to undermine that program.

The first was the unexpected drought which cut across all budget appropriations and all normal anticipations, damaging about 25 percent of the range land, as you know, Senator Hayden and Senator Chavez, very well; some 39 percent of the mature herds, and some 37 percent of the Navajo population were very severely affected.

The very welcome snows of the late spring, with which you are familiar were, of course, too late to relieve that situation. In fact, they added a complication because the birth of lambs was threatened and the Navajo families were up all night, including their children, watching those lambs, and carrying them into their hogans as fast as they were born to prevent their dying.

Of course, it was good for forage, but it raised a very serious complication on the reservation.

That is one factor which affected the Navajo lands and immediately adjacent lands.

HOUSE CUT

Secondly, the severe across-the-board horizontal cuts in the interest of national defense, which were stipulated by Congress and furthermore required in particularity by the administration, although entirely justified, of course, in the interest of national defense, nevertheless had the effect of cutting down a program where it was not necessary.

The Navajo rehabilitation program has been cut over $5 million, with inadequate appropriations to begin with.

A big program of this sort, as certainly everyone knows who knows that country out there, can only get off the ground by heavy appropriation in the initial years. A little, piddling appropriation in the initial years will threaten the ultimate success of the program.

Of course, they will spend it, but will they spend it successfully, to get the program off the ground in the rehabilitation effort which you have authorized?

ROAD PROGRAM

We submit that two things should be done, and I must say that your communities around the reservation out there feel this so keenly that they themselves have met, through their chambers of commerce, on May 15—I am sure you have received communications from them—and they have recommended that the entire road program of $20 million in the rehabilitation bill be expedited through the first 4 years.

Now, curiously enough, that can be done very successfully and quite consistently with national defense, because the road construction on the Navajo Reservation is basically gravel. There is ample supply of gravel on the reservation.

There is some asphalted emulsion used, not a great deal, but that is in free supply. There is plenty of it.

These roads can be built very largely with existing equipment. As to supplemental equipment, the equipment that may be needed for the program that I am going to suggest to you, we are aware of the fact that the War Department is disposing of used and surplus or obsolete road equipment which can be picked up by the other agencies at a fraction of the cost, some of it for 10 cents on the dollar, as a matter of fact. It is just as good as we need for this work on the Navajo Reservation.

So without impinging at all on the war effort, this used equipment can be picked up to the extent that is necessary for the roads.

The only war material that is really needed are a few culverts, and there is very little material needed in them at all.

The timber for the bridges can be made and cut in the Navajo sawmill and on the Navajo lands.

The labor, of course, is plentiful.

Now, there are reasons why this ought to be done in aid of national defense; not only reasons why it is not against national defense, as I pointed out, but why it is in aid of national defense.

In the first place, you have ample labor supply there. You are not robbing anybody else because these Navajos have to be trained. You have a substantial group that have been in training on the present road program. It has gone rather slowly, in my opinion, but it is good workmanship. These men are trained, and more can be trained.

You have an imperative need, as you gentlemen certainly know, for an alternate to Highway 66, if that should be blown up or bombed or bridges sabotaged in time of war. In any event you need an alternate in this desert area as big as West Virginia, and these two cross-reservation highways will supply that.

URANIUM MINING OPERATIONS

Transportation for the Atomic Energy Commission is vitally needed—I have been close to the Atomic Energy Commission in the

development of the plant for the establishment of the mill at Shiprock, and I know how they feel about it, the need for that.

Senator CHAVEZ. Did not the council sign a contract with some mining company?

Mr. LITTELL. They authorized it. It is not quite signed, but is ready to go; yes.

Senator CHAVEZ. But, anyway, they are working on the plant.

Mr. LITTELL. Very definitely.

Senator HAYDEN. Where is the deposit itself?

Mr. LITTELL. The workings are in the Lukachukai area, that mining area, which is accessible from there. That is where the company is operating two mining leases, and building a plant with the approval of the Atomic Energy Commission, at Shiprock.

The actual stockpiling on the reservation will begin with 30 days after the lease is signed.

The Advisory Committee approved that lease when we worked over the final details in the last council meeting in May.

Senator CHAVEZ. This is also a fact that outside of uranium the possibility of developing other minerals that are needed in national defense enters into the situation, that it can be found within the reservation?

Mr. LITTELL. Very great indeed, Senator.

Senator CHAVEZ. And which cannot be utilized unless you have transportation to get either to the mines or to transport the minerals to where they are needed?

Mr. LITTELL. That is precisely correct, Senator.

The point in respect to uranium is that they have already seen samples brought in by Navajos that are very rich. Indeed, they won't tell where it is until they can get the right arrangement on their leases and permits, and then you have to open it up and build roads.

There are several hundred thousand dollars in roads just to open up Lukachukai.

So there are great possibilities there, and the country needs that uranium.

Jesse Johnson, the head of the raw materials section, is quite sure we will need another mill at Tuba City, on the western side of the reservation. That area needs to be opened up.

IMPORTANCE OF ROAD CONSTRUCTION

Senator CHAVEZ. I saw a study made up by some professor of the University of Texas, on the Navajo situation. He makes this statement—which I think is correct—that as much as they need medicine, as much as they need water, as much as they need schooling, the basic one for the moment is roads. He went to that extent. He said that was because the others would probably be a matter of course if they could only get over that reservation.

Senator HAYDEN. You know, Senator Chavez, that in times past there were those who opposed building roads into Navajo country because they wanted the Navajo to remain as he was, a picturesque character that could be kept embalmed, so to speak, in his ancient tribal customs and things of that kind. That was very interesting for painters, artists, and writers——

Senator CHAVEZ. And for politics.

Senator HAYDEN. But as far as the poor Indian was concerned, they kept him entirely separate, away from civilization.

As quickly as road development takes place, a Navajo gets out and wants to buy a Ford and pretty soon he finds out there is an outside world.

Along the same line, by opening up the reservation with proper roads, there is an increase in tourist travel. There is a market there for silver because they produce it.

It is highly advantageous from every respect, and I certainly agree it is a civilizing influence that you just cannot get any other way.

Senator CHAVEZ. That is the history of roads in the entire United States exactly. They used to be isolated, especially directly after the War Between the States. The South would be cussing the North and the North would be cussing the South, and both would be cussing the wild and woolly West.

Then Mr. Ford invented a jalopy and that necessitated oil and gasoline, and now they get to travel to the other sections and get to know the country. That is what really united the United States: roads.

Mr. LITTELL. We recognize that millions and millions of dollars were granted for building roads in Turkey, Greece, Italy, Africa, Malay, the Philippines and any number of foreign countries, in Greece, with ECA and other money, recognizing that is the first step in opening up an undeveloped country.

The program that I would like to submit to you, if I may—and this is new; this is right out of the blue; this is the tribe coming to you with its appeal since the Bureau has been heard—is this: We think that if you should authorize those two main highways from Shiprock, Ganado, to Tuba City, across the reservation to the west, the alternative to 66, and back across the reservation from Tuba City to Shiprock, a triangular shape, those two main highways, and contributory and incidental roads, which may also be a little narrow, incidentally, probably 18 feet wide, a $7 million program in the 1952 year, as outlined on page 4 of my statement; a $6 million program in the following year, 1953, completing those roads and carrying out further roads from 66 to the Hopi Reservation in the third year $5 million; two roads up to the Hopi Mesas, and contributory and secondary roads to the extent of $1 million in the fourth year.

Those roads are in New Mexico also from 66 northward to Crownpoint and Torreon, and to Fort Wingate and the sheep-breeding laboratory in New Mexico.

Then the last year there is $2 million for the filling in of the secondary roads—a total of $20 million.

That is basic—as you gentlemen know who know the country so much better than I do—as basic to the tribal enterprises which you contemplate; basic to the children, because it is futile to try to get the children to the schools unless they have highways.

It is also basic to the whole health program.

Now that is the first submission to you.

REQUEST FOR USE OF SECTION 1214 RESERVE FUNDS

The second submission is that we would like you to direct the Bureau of the Budget to make available the funds that were reserved, under

section 1214 of the Appropriation Act of 1951. These reservations, you will remember, were cut in all budgets in the interest of national defense, to cut down nondefense construction work.

The status of the entire Navajo Rehabilitation Act appropriations is set forth on exhibit A, in which you will find the first three columns pertaining to the appropriation of 1951 fiscal year.

You will recall that there was no actual cut; it was simply reserved.

Senator CHAVEZ. Will section 1214 authorize them to do that in case of some emergency?

Mr. LITTELL. That is right. And that is $2,804,000 that was reserved in that way.

What we wish to submit to you is that there is work of that nondefense character, aside from roads, which consumes virtually no defense materials, which meets the emergent situation in the Navajos and also is foundational to your rehabilitation program.

AMOUNT FOR WELL DRILLING

That consists, namely, of these items: well drilling, at an estimate of $1 million. The Navajos have already appropriated what they can of their funds, $250 thousand, to help in that program.

Senator O'MAHONEY. Where would that drilling take place?

Mr. LITTELL. All over the place where the Geological Survey report now gives the advice that wells should be drilled. We have the data on that now.

Senator O'MAHONEY. Is that in Arizona, or New Mexico?

Mr. LITTELL. It is mostly in Arizona, but it is in both places.

Senator CHAVEZ. The largest part of the reservation is in Arizona; is that correct?

Mr. LITTELL. That is right.

It sounds like a lot of money, $1,000,000, for a little over a hundred wells, depending on their average cost. Some of them will come in at a little more shallow depth, of course, and some of them will require more drilling. But it would be about $10,000, they believe, for the average cost.

Senator ELLENDER. Will those be used for irrigation?

Mr. LITTELL. No, sir.

Senator ELLENDER. Cattle?

Mr. LITTELL. Cattle. They erect a water trough right there and they erect a windmill which operates practically automatically. There is very little maintenance on it.

Not only that, but there is very little defense material that is used, aside from a handful of cement for the trough, which is negligible.

That defense material is the casing, which would amount maybe to a thousand feet of steel pipe.

But that will be repaid in the defense effort by increasing the production of sheep, which you know are in short supply, and sustaining the Navajo population itself.

Senator CHAVEZ. And save the Government millions of dollars in hospital bills and medicines.

Mr. LITTELL. Exactly.

Senator CHAVEZ. I know that has been the record with the Pueblos in my State. They used to use ditch water from the irrigation ditches, but the Government went in there and sunk a few wells. Now they get fine water and the infant mortality rate is way down.

But here in the reservation sometimes you wonder where they might get any water.

Mr. LITTELL. The geologists say there is water there at different levels, and it is pretty well mapped out. There is a real, concrete, intelligent basis on which to go forward with the program.

Irrigation work is another item which requires virtually no national-defense materials. These are excavations, the movement of dirt, to build that Hogback canal to connect the water with already purchased pumps. All they have to do is to put those pumps in place, excavate that canal, and you immediately irrigate a large area of land around it.

Then there are some few earth-filled dams at two or three other places, at Fruitland and Ganado, which also require no materials.

We estimate $676,700 of the reserve fund for that.

TUBA CITY HOSPITAL

A desperate need is the Tuba City Hospital. That will be the juncture point of these two highways that cross the reservation. It is an isolated area. If a man is seriously ill there he just has to die if he cannot get the hospital facilities there because it is just too hard and too rugged to get out of there.

Senator HAYDEN. There is a highway from Tuba City down to the hospital at Willow Springs, is there not?

Mr. LITTELL. Yes, there is.

Senator HAYDEN. But that hospital, I understand, is crowded.

Mr. LITTELL. It is as crowded as can be. This one is definitely crowded. You have 34 patients per day there, as I remember, last year, with a capacity of 25 to 28 beds.

I mean their beds are scarcely cool when they take in a new patient, and they discharge people who should remain longer.

That should be raised to 75 beds.

You have a number of hospitals in there in the rehabilitation program, but this is one that should go without further delay.

Senator CHAVEZ. Referring to your item No. 3 on your exhibit A, Mr. Littell, "Surveys and studies of timber, coal, minerals, etc.," can you tell us what that is?

Mr. LITTELL. This is the way, Senator, the appropriation was put up by the Bureau, acted on by Congress in 1951, and again by the Bureau and by Congress in 1952.

We suggest reorientation in that. That is what I am suggesting now.

This is the way it actually is at the moment.

Senator CHAVEZ. Does the Bureau make its own survey, or do they transfer some of those investigations, say, to the Geological Survey, the Bureau of Mines, or the Forest Service?

Mr. LITTELL. Yes, definitely.

Senator CHAVEZ. Once in a while Congress prefers not to have so much duplication as long as we have the Geological Survey and the Bureau of Mines, rather than starting another agency within the same department.

Mr. LITTELL. I answered quite confidently, Senator.

I hope I am 100 percent correct, because it makes sense, what you just said, and, aside from the timber, I think they have their own forestry service.

Senator CHAVEZ. I think that is a very good item.

OFF-RESERVATION EMPLOYMENT

As to your item of off-reservation employment, when we had hearings before the Subcommittee on the Department of Labor and Federal Security Agency, I inquired of Mr. Goodwin rather tartly as to what the Bureau of Unemployment Security of the Department of Labor was doing with reference to the Indians, including the Navajos. I stated I was asking that because of the information I had obtained, in good faith, to the effect that very little was being done for the Indians.

They would say, "We are working at it; we are working at it," but they would not be placing the poor Navajos in any work.

They really wanted to work, and I was hoping they would not be used as guinea pigs and that they would take their part in the unemployment facilities just like anyone else instead of being treated separately.

Mr. LITTELL. I quite agree, Senator. I think they have done a fairly constructive job.

We expect over $6 million return this year for off reservation employment. That was the last published estimate I saw.

Senator CHAVEZ. We have that agency within the Department of Labor, which is the one that should have it, and then there is the Indian Bureau that has a department doing the same type of work.

I prefer that they be given some irrigation water and some domestic water and give them some schools, and give them some medicines.

Mr. LITTELL. We hope that this committee will follow the recommendations of the Bureau. I have not covered the testimony for 1952 in respect to the rest of those items for the year 1952, the last three columns in exhibit A, because the Bureau has covered that detail by detail, and I would not bore you by duplicating.

We hope you will follow that suggestion.

But the tribe adds these suggestions which I have made: First, roads, an appropriation this year of $7 million, and the expediting of the whole program throughout the next four years, as much as I have reviewed it on page 4 in my prepared statement.

RECAPITULATION OF AMOUNT REQUESTED

Then there is well drilling, at $1 million; irrigation work, at $676,700; the Tuba City Hospital, at $910,300, and the Reams Canyon electric steam distributing system, because the plant is already constructed.

It is a shame to have that plant in any way reduced to futility by lack of a distribution system, and that is only $217,000.

So the recommendations are most respectfully submitted to this committee, summarized on the last page of my report, page 7.

We hope that the committee will see fit to recommend, instructing the Bureau of the Budget to release that $2,804,000, but redistribute it to these items which are not interfering with national defense, but which are so vital to the rehabilitation program and to the relief of this drought period from which we have just come.

Senator HAYDEN. The difficulty about that is that limitation was put on with the idea that it would have the effect, as far as the House is concerned, of reducing personnel in the departments.

In the application, however, instead of reducing personnel it cut down work on substantial projects.

Mr. LITTELL. Exactly.

Senator HAYDEN. The idea was to save $550 million, and everybody that had anything to do with it in the House was satisfied that they had accomplished that purpose.

How to get it out of them is another question.

Mr. LITTELL. Senator, you have a clause in that act which might attain it. It says:

> In the interests of preserving life or health or property, exceptions can be made.

Now, we can't claim that if you don't do this, so many Navajos will die as a result of this drought. Therefore, I can't come to you as a lawyer and say I can bring this case squarely within the letter of that exception, but I certainly bring it within the spirit of that exception.

Senator HAYDEN. But consideration must have been given to the exception at the time the reduction was made.

Mr. LITTELL. Or thereafter, as I read the act. Is that not correct?

Senator HAYDEN. I understood they went out to get $550 million.

Mr. LITTELL. Yes, sir. But they recognized there might be some terrific hardships and some bad results from that, hardship cases. And this was a hardship case that was put in there. It even went so far, as I recall, of letting the agency go ahead and spend the funds, if necessary, and appeal in its next deficiency appropriation for authorization to do so.

SECTION 1214 RESERVE FUNDS

Senator HAYDEN. I am just disturbed about the mechanics of getting at it.

Mr. LITTELL. Quite right. I understand.

Senator HAYDEN. The clerk points out to me there is no exception in this provision. This section 1214 reads:

> Reappropriations, contract authorizations, reauthorizations, made by this Act for departments and agencies, except branches of the Government, shall without impairing the national defense, be reduced in amount of not less than $550 million through the apportionment proceedings provided by section 1211.

Mr. LITTELL. It is another section. It is not in that section.

Senator HAYDEN. That is the added deficiency provision.

Mr. LITTELL. Well, I am far from being an expert on the techniques of this subject, Senator, but I read that other paragraph with great care and it seems we almost came within the letter, but certainly within the spirit.

RESTORATION REQUESTED

Senator HAYDEN. The other thing is that the request that we have here from the Department relates to a cut made in the budget estimate for the Navajos by the House committee. The action of the House will require a reduction of $6,784,000, $4,521,500 for that year. This reduction compares with $8,645,000 available for the fiscal year 1951, after $4,304,000 was placed in reserve under section 1214 of the appropriation.

The objective of the Rehabilitation Act will be accomplished within a reasonable time and the rate of the appropriation will certainly be higher than $4,500,000.

They are merely asking to have this money restored. It was not restored; could the Department allocate it in any manner, such as you suggested?

Mr. LITTELL. We are talking about two different years. I am glad you asked that question.

We join with them in recommending the restoration of those specific items which are mentioned in the last three columns of my exhibit A for 1952.

We go on from there and say: Please go back to 1951, to this reserve fund, under 1214. Direct the Bureau of the Budget to release that fund, but reallocate it to nondefense work such as I have outlined, such as wells, irrigation, and the two items like the Tuba City Hospital and Reams Canyon, which are minor items, mainly wells and irrigation.

REQUEST FOR EXPEDITING AUTHORIZED EXPENDITURE

The third thing we ask is that you do something new and original by expediting the authorized expenditure of $20 million for roads through this reservation, expediting it now as a substitute for a lot of this stuff that is cut, recognizing its need for national defense and its basic part in the Navajo rehabilitation program; expedite it, accelerate it to the point of giving us $7 million for those roads in 1952 by a new item.

It is a bold thing.

Senator HAYDEN. For which there is no budget estimate.

Mr. LITTELL. For which there is no budget estimate, except what I am supplying here now.

Yes, pardon me; budget estimates are in your rehabilitation bill, but spread over 10 years.

Senator CHAVEZ. That is authorization only. That is not a budget estimate for an appropriation.

Mr. LITTELL. It is not a budget estimate in the sense of one that is passed by the Department of the Interior and the Bureau of the Budget, because you must remember that the Department of the Interior cannot do it. We can come to you. I can come to you for the Navajos as an independent matter.

Under the executive department regulations, the Bureau has to go to the Bureau of the Budget, do they not?

Senator HAYDEN. That is correct.

But we are supposed to operate within the budget total provided by the President. We do not necessarily do that as an item. We can cut in one place and raise in another.

HOUSE ACTION ON BUDGET ESTIMATE

The present budget estimate for Navajo roads is $1,000,000. The effect would be to add $6,000,000.

Mr. LITTELL. The present budget estimate is $500,000 for this year. One million was requested in the Budget and it was cut $500,000.

Senator HAYDEN. The budget estimate, you understand, was $1,000,000. The House allowed $500,000.

Mr. LITTELL. The tribe comes to you independently and says, "Will you kindly disregard the estimate of the Interior Department

and of the Bureau of the Budget to the extent of expediting what you have authorized in a prior act, because of the emergent situation which confronts us, and because in the program we are asking for, it is basic to the whole rehabilitation program."

In this recommendation we have been joined unanimously by the entire community all around the reservation, New Mexico, Arizona, every place, and all these chambers of commerce.

Senator HAYDEN. I think you make a good case, but I was just trying to point out the mechanical difficulties that we have here.

Mr. LITTELL. I am glad you did, and I am aware of those. I am an old hand around the Government, and I know there are these difficulties.

But I do have implicit confidence in the supreme power of the Congress to do what it thinks should be done, what it thinks is appropriate.

Senator CHAVEZ. We are doing the appropriating, not the Budget Bureau.

Mr. LITTELL. That is right.

Senator CHAVEZ. It is all right to get information on fiscal matters for everybody from the Budget Bureau.

If Congress, in its wisdom, thinks they should cut below the budget either way, I know Congress has the right to do it.

Senator HAYDEN. Certainly.

Mr. LITTELL. A simple example in this case is the fact that the Bureau of the Budget did not know anything about the drought. The Lord Almighty, for some reason, sent this drought and cut across the Budget Bureau set-up. He has reversed them to that extent already. And I take it Congress has a similar power.

Senator HAYDEN. Thank you, sir.

Mr. LITTELL. Thank you very much for allowing me to be present sir.

Senator HAYDEN. Your complete statement will appear in the record.

Mr. LITTELL. Thank you very much, Mr. Chairman.

(The statement referred to is as follows:)

STATEMENT BY NORMAN M. LITTELL, TRIBAL ATTORNEY ON BEHALF OF NAVAJO TRIBE OF INDIANS

I. UNEXPECTED FACTORS RETARDING NAVAJO REHABILITATION

Unexpected factors cut across the long-range program for Navajo-Hopi rehabilitation as provided by Congress in the spring of 1950 (Public Law No. 474, approved April 19, 1950).

1. Drought

During the last year drought conditions struck a blow at the already depleted grazing economy of the Navajos, on and adjacent to the Navajo Reservation by damaging 25 percent of the Navajo's range land, 39 percent of their mature sheep, and gravely affecting 37 percent of the Navajo stock-owning population.[1] In many areas Navajos have carried water by hand to their sheep, and food as well, in an attempt to keep alive depleted flocks standing between them and hunger. Recent snows over large areas of the reservation were too late to alleviate the dire consequences of the drought. Resulting losses in this spring's lamb crop in drought areas ranged from 15 percent to 20 percent of the lambs. During late spring snows, otherwise desirable for the sake of moisture and growth of forage, Navajo children as well as adults stayed up with their stock throughout

[1] Report of Allan G. Harper, area director, Navajo Service, Window Rock, Ariz., December 21, 1950.

the night during considerable periods of time in order to carry into their hogans the lambs born during the unseasonable weather, to warm them by the fire and keep them alive.

The Navajos did not wait for Government aid to meet the new crisis but voted $550,000 from their tribal fund to aid livestock owners in moving their stock to other grazing lands and in purchasing feed and concentrates to keep their stock alive in the drought areas. Another $250,000 was voted for the drilling of new wells on geological advice that water is available on the reservation if wells are drilled in prescribed areas (in contrast to $45,000 furnished from Federal Government funds).

2. Reduction in appropriations; national defense

Simultaneously with this grave reduction of their natural food supply the Navajos also faced a grave reduction in the rehabilitation program appropriations designed to develop alternative forms of employment and production on the reservation. The Korean War brought blanket cuts in all appropriations. The greatest cuts in any one subject of the Interior Department's appropriation were in the Navajo program—said to be nondefense work. From a modest appropriation of $11,449,000 to start the Navajo-Hopi rehabilitation program in 1951, $2,804,000 were cut, and from a still more inadequate appropriation for 1952 in the amount of $6,784,000, $2,262,500 were cut, in the interests of national defense. (See exhibit A attached hereto reflecting status of Navajo-Hopi rehabilitation appropriations to date.)

While the need for rehabilitation measures has been deepened and broadened by drought, the 88-million-dollar Navajo-Hopi rehabilitation program has been largely emasculated by these insufficient appropriations and horizontal budget cuts in the interests of national defense. Ultimately Congress will fulfill its commitment to the Navajo-Hopi Tribes, but there is a grave danger that small dribbles of appropriations at the outset will undermine and defeat the intent. The risk is needless because there is a solution entirely consistent with curtailed use of construction materials needed for national defense.

II. RECOMMENDATIONS; NONDEFENSE CONSTRUCTION WORK

There is work which is basic and essential to the Navajo-Hopi rehabilitation program which can be done now which is not only consistent with national defense needs but will make vital contributions thereto, as follows:

1. Roads

The 24-foot gravel-roads construction on the reservation do not consume national defense materials, except for a limited supply of culverts and bridge-construction materials of which a large portion can be furnished by timber from the Navajo Reservation. The whole economy of the Indians is dependent on early construction of roads. As stated in the report of the House in support of the rehabilitation bill: [2]

"* * * effective education and health programs are completely dependent upon construction of roads on the reservation, which is equal in size to the State of West Virginia."

So basic is the road program to the entire rehabilitation project that all of the chambers of commerce in the communities surrounding the reservation at a meeting on May 15 (50 representatives in all) buried all of their differences as to highway construction connecting these communities with the reservation and unanimously endorsed the completion of the entire road-construction program contemplated by the rehabilitation bill.

This can be done, consistent with and in aid of the program of national defense, for the following principal reasons:

(*a*) *Equipment.*—A large part of the needed road-construction equipment is already available on the reservation. The Department of National Defense is purchasing the newest and latest road equipment and from time to time makes available to other agencies of Government used surplus road equipment which would be entirely adequate for the purposes of the Navajo Reservation. It can be purchased from these agencies of Government at a fraction of the new cost of such equipment.

(*b*) *Road materials.*—Materials will consist wholly of gravel available in plentiful supply on the reservation, plus a limited amount of asphaltic material which is

[2] Rept. No. 1474, 81st Cong., 2d sess., accompanying S. 2374, p. 2.

not in short supply and is available. Bridge material will be principally timber from the Navajo sawmill.

(c) *Labor.*—Navajo labor will be plentiful, and complementary to the existing strained economy of the reservation, requiring only training. This is already in progress with a large number of Navajos in the initial stages of the present road-building program (now being carried out with the $960,000 appropriated for 1951. This fund will be exhausted June 30, 1951).

(d) *Need for alternate to Highway 66.*—The main highway across the Nation is route No. 66. In the event of war and the possible bombing or sabotage of the bridges on this highway there is no alternative thoroughfare across this area of the United States. The highway across the reservation as proposed below will offer alternative routing of traffic and essential communication between the communities around the reservation. For this reason the route across the middle of the reservation, described below, will be given top priority.

(e) *Uranium.*—Uranium resources known to exist on the Navajo Reservation in areas near the Lukachukai now under development, cannot possibly be moved without highways. Samples from undisclosed mines discovered by the Navajos, have proved to the Atomic Energy Commission that valuable resources exist within the reservation, but even when discovered the ore cannot be moved without roads.

(f) *Transportation of resources.*—The national defense would be greatly aided by increasing the movement of livestock into markets from the reservation, as well as timber and coal.

It is submitted that an accelerated construction program for roads across the reservation should be approved as follows:

Fiscal year 1952.—Route P–3, 165 miles (minus miles under construction now) from Window Rock, Ariz. through Ganado, Ariz. to Tuba City across the reservation. Estimated cost	$3,500,000
Route P–1, 201 miles long from Tuba City in a northeasterly direction across the reservation to Shiprock, N. Mex. Total estimated cost, $5,000,000.	
Construction in 1952	1,500,000
Contributory secondary roads	2,000,000
Total in 1952	7,000,000
Fiscal year 1953.—Route S–2 from Route 66 near Winslow, Ariz. to the Hopi Mesas, and P–6 from Route U S 66 near Holbrook to Route 3 near its entrance into the Hopi Reservation near Keams Canyon and Steamboat. Estimated cost	3,500,000
Route P–8 from Route U S 66 at Chambers to Route 1 in the northern part of the reservation.	
Estimated cost	1,500,000
Contributory secondary roads	1,000,000
Total in 1953	6,000,000
Fiscal year 1954.—Continue work on Routes S–2, P–6, and P–8. Estimated cost	3,000,000
Route P–14 from Rote U S 66 in New Mexico near Thoreau, N. Mex. through Crownpoint to Torreon, and S–10 north from Crownpoint to Quan's Lake, N. Mex. P–2 from Route U S 66 to Fort Wingate and Sheep Breeding Laboratory in New Mexico. Estimated cost	2,000,000
Total in 1954	5,000,000
Fiscal year 1955.—Other secondary roads connecting the foregoing. Estimated cost	2,000,000
Total for 4 years	20,000,000

So far there is approximately 40 miles of the above road construction completed. Only one-eighth of the primary system is in operation.

Establishment of new enterprises and additional means of employment for Navajos as contemplated by the rehabilitation program (when national defense

materials restrictions are relaxed), presuppose a road system on the reservation and cannot succeed without it.

Nor can an adequate school system on the reservation ever raise the Navajos to the accepted standards of American citizenship unless the children can be transported from their widely scattered communities and hogans to the schools to be constructed. Boarding schools as now contemplated in the Navajo educational program cannot function properly without adequate roads.

Health and hospital services can never be of much value to the Navajos unless patients can get to the hospitals and doctors can get to the Indians. As stated by Dr. Morris S. Fleischman, medical officer, Cheyenne Agency, in a report to the Cheyenne Tribal Council on April 11, 1951, after discussing needs for hospitals and clinics:

"It is very nice to plan such a program and have a clinic building in Dupree and hospital in Eagle Butte. What about the patients who live away from all-weather roads? No matter how good our physical plant is, we still need good roads to get patients to hospitals and good roads to permit uninterrupted holding of clinics as scheduled. This whole health program is vitally dependent on communicating roads in order to effectively realize its aims and functions."

2. Well drilling

There are more than adequate well-drilling rigs around the reservation available for work on the reservation without placing additional burdens on national defense construction materials. Only a limited amount of well casing will be needed and this relatively small amount of steel will bring in a greater contribution to the defense food production program in increasing the livestock of the Navajos for public markets and for their own use.

A geological survey establishes the existence of water at many places on the reservation. One hundred or more additional wells is a modest number for so vast an area. Estimated cost of about 100 wells, $1,000,000.

3. Irrigation work

This construction work is accomplished almost wholly by earth-filled dams and canal excavation work with a few minor earth-filled dams requiring very little critical materials needed for national defense. It gives needed work to the Navajos, conservation of water supply, increase of forage, and consequent stabilization or increase of sheep production on the reservation by increasing the irrigated acreage.

The principal projects, consisting of almost wholly earth excavations, will be in the construction of the Hog Back canal, with some work at Many Farms, Fruitland and Ganado irrigation projects. Pumps are already on hand for use in the Hog Back system and by excavating the canal water can be led to the pump locations. Adjacent lands can immediately thereafter be irrigated and cropped. The estimated cost for carrying on the above construction work is $676,700.

4. Tuba City Hospital

Enlargement of the Tuba City Hospital to 75 beds has long been desperately needed and is consistent with national defense program because of the well-known hospital shortage throughout the United States, gravely unsatisfied by the Hill-Burton Act. The isolation of the Tuba City is such that a seriously ill person there would probably die before he could be taken to another hospital. Estimated cost, $910,300.

5. Reams electric steam and distribution system

The central heating and power plant is already provided for this year, but is prevented from realizing its intended purpose by lack of a distribution system necessary to make full use of this facility. To avoid this waste of a sound capital investment, the authorization to complete this system should be made for the amount of defense materials which will be required, and is relatively small. Estimated cost, $217,000.

SUMMARY OF RECOMMENDATIONS

The Commissioner of Indian Affairs and other witnesses from the Bureau have already requested the restoration of the items cut by the House from the 1952 budget estimates (column 5 of exhibit A attached hereto). The tribe joins with the Bureau in urgently requesting the restoration of these items (except that item 7 of exhibit A, pertaining to roads, is separately dealt with herein).

The specific requests urged on behalf of the tribe in this statement may be summarized as follows:

For the fiscal year 1952

1. Appropriation for roads	$7,000,000
2. Instructions to Bureau of the Budget to release $2,804,000 reserved pursuant to sec. 214 of the Appropriations Act of 1951 to be redistributed however for the following purposes, not in conflict with the national defense effort, as set forth above:	
Well drilling	1,000,000
Irrigation	676,700
Tuba City Hospital	910,300
Keams electric steam and distribution system	217,000
Total	2,804,000

At a time when vast sums have been and are being appropriated for rehabilitation of peoples in underdeveloped countries elsewhere in the world, including at the present time over $118,000,000 for countries of the Far East alone where many of the problems of rehabilitation are strikingly similar to those confronted on the Navajo Reservation, it is submitted that the foregoing requests should be approved without hesitation for the basic needs of the Navajo-Hopi rehabilitation as approved by Congress after more exhaustive consideration than could at any time be given to the foreign program.

Under the ECA program we are building roads all over the world—in Turkey, Greece, Italy, Africa, French and British Africa, Belgian Congo, Borneo, Indochina, Malaya, and Burma. It is universally recognized that the first step in helping backward people to a better social and economic condition is to improve roads as a first requirement for their economic self-development, education, and health. This is equally basic to the Navajo program where no other modern form of transportation exists.

EXHIBIT A.—*Analysis of Navajo-Hopi rehabilitation program, fiscal years 1951–52*

	(1) Appropriation, 1951	(2) Reserve, sec. 1214	(3) Availability, 1951	(4) Budget estimate, 1952	(5) House cut, 1952	(6) House allowance, 1952
1. Soil and moisture conservation and range improvement	$300,000		$300,000	$300,000		$300,000
2. Construction, irrigation projects on Navajo	792,475	$225,000	567,475	296,500	$130,000	166,500
3. Survey and studies of timber, coal, minerals, etc	15,545		15,545	125,000	50,000	75,000
4. Development of industrial and business enterprises	52,000		52,000	82,500	30,500	52,000
5. Off-reservation employment	194,600		194,600	43,000		43,000
6. Relocation and resettlement of Navajo-Hopi Indians (Colorado River)	950,000	150,000	800,000	500,000	190,000	310,000
7. Roads and trails	960,000		960,000	1,000,000	500,000	500,000
8. Telephone and radio communication systems	105,200		105,200	88,000		88,000
9. Agency, institutional, and domestic water supply	642,200	100,000	542,200	136,000		136,000
10. Revolving loan fund				800,000	400,000	400,000
11. Hospital and health facilities	1,255,300	513,000	742,300	340,000	200,000	140,000
12. Educational facilities	5,810,800	1,816,000	3,994,800	3,073,000	762,000	2,311,000
13. Housing and necessary facilities and equipment	26,300		26,300			
14. Common service facilities	345,100		345,100			
Total	11,449,520	2,804,000	8,645,520	6,784,000	2,262,500	4,521,500

Total 1951 cut	$2,804,000
Total 1952 cut	2,262,500
Total cut	5,066,500

BUREAU OF LAND MANAGEMENT

MANAGEMENT OF LANDS AND RESOURCES

STATEMENT OF HON. LOWELL STOCKMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

RESTORATION OF HOUSE CUT URGED

Representative STOCKMAN. Mr. Chairman, it is well known to this committee that the activities of the Bureau of Land Management are an important factor in the land economy of the West.

We in Oregon are particularly interested to see that the progress made by the Bureau in the past few years is not retarded because of a cut in appropriations. Such a cut would be detrimental to our livestock and timber industries. It would, in fact, impede progress on many activities which are geared to smooth operation of public lands in the West.

For this reason I am urging the restoration of the $800,000 cut made on the floor of the House in the Bureau of Land Management appropriation.

LAND CLASSIFICATION

This cut especially affects management work in land classification and surveys. As you know, both are essential to further development and use of the public lands. It is a misconception, which I believe many people have, to think of the land-classification activity as standing alone.

Land classification is really an activity essential to the production job of the land offices, the grazing offices, and the forest-management activity.

Most land applications, particularly homesteads, desert entries, exchanges, rights-of-way, purchase of public lands, and others, require an examination on the ground before the application can be processed to completion. A reduction in land-classification money affects the expeditious handling of land applications for the benefit of the people residing not only in my district, but in all of the public-land States.

In the case of cadastral surveys, it is again not a matter of making surveys for the sake of surveys, but as a necessary prerequisite to the performance of other work of the Bureau.

The exact location by legal description of the lands involved in exchanges, sale of an isolated tract, or timber sale, to mention a few types of cases, is obviously necessary to adjudication of an application in order to protect both the Government and the applicant.

I am particularly concerned about this cut because in my district, resurvey of about 75,000 acres will be delayed. Involved in this area are six or seven large State exchanges, as well as other land applications.

ADMINISTRATION OF GRAZING LAND

Now, let us look at another activity of the Bureau of Land Management seriously affected by the cut.

This is the administration of grazing lands. The appropriation under the House bill makes it impossible for the Bureau of Land Management to staff the grazing activities to the extent set by the

Nicholson plan, which has received the approval of the Interior and Insular Affairs Committees of the House and Senate, and which has been accepted by the livestock industry.

This is evidenced by the stockmen's agreement to an increase of 4 cents in the grazing fees, with the expectation that the increased revenue would justify an appropriation which would permit the total employment of 242 people for the administration of this activity as recommended by the Nicholson plan.

This increase in grazing fees from 6 cents to 10 cents an animal-unit month, plus a 2-cent range improvement fee, was made effective May 1, 1951, and, as a matter of fact, as shown by the House report, the increased fee will produce $2,100,000 which is far more than required by the budget estimate.

The House action will only allow a staffing of 197 positions, 45 less than called for by the Nicholson plan.

In my district there are six grazing districts, embracing over 13 million acres of Federal range, which are used by 1,373 permittees grazing 202 thousand sheep and 340 thousand cattle and horses.

Two of these districts are staffed by only one man and a clerk. Two districts consolidated under one supervisory organization which form one of the largest grazing districts administered under the Taylor Grazing Act are staffed with only two men and a clerk. Only one man and one clerk are available for two large districts.

Under the Nicholson plan all of these districts would have one more man. The lack of the personnel is reflected in the serious trespass problem especially in two of the districts. Many complaints regarding the lack of trespass enforcement have been made by my constituents.

At the present time 40 percent of the livestock operators in Oregon have 10-year grazing permits, but these permits will expire in 1951 and 1952.

Without additional personnel the Bureau of Land Management will be unable to issue new permits, and, furthermore, they will not be able to renew the 10-year permits which will expire by 1952.

Before these permits can be renewed it must be determined that—

1. Permittee now owns or controls adequate qualified base property to support the grazing privileges he has on the Federal lands.

2. The Federal range has been adjudicated proportionately among all qualified applicants.

3. Total privileges granted in a unit or allotment are within the grazing capacity, and

4. All operators have sufficient land to insure a year-round operation for the livestock.

Many of these term permits are pledged as security for loans to livestock operators. The failure to issue new permits or renew expiring permits may result in a number of these loans being called.

I do not need to point out the importance of the livestock industry to the welfare of the State of Oregon, as well as the other Western States, and I believe it is evident that this cut in the appropriation cannot help but reflect to the detriment of that particular part of the economy of the West.

FOREST MANAGEMENT

Another activity to suffer from the House cut is forest management. If the House action stands, it will be necessary to reduce this forest management activity by $150,000.

I know this committee thoroughly understands the necessity for getting all the timber possible on to the market to aid the progress of the defense program. In Oregon the most important timber stand is, of course, on the O. and C. lands in the western part of the State. The reduction in appropriation will result in a reduction of approximately 190,000,000 board feet in timber sales from the O. and C. lands. The corresponding reduction in receipts will approximate 3½ million dollars for the fiscal year.

Timber sales on public domain forest lands throughout the Western States will be reduced by an estimated 50,000,000 board feet, having a sale value of about $500,000. A major portion of this reduction—perhaps as much as $300,000—will occur in sales of ponderosa pine in public-domain lands east of the Cascades in Oregon.

The forest-management program of the Bureau does not consist solely of selling timber. The real job is the conservation of this important resource.

In addition to curtailment of sales, other important though perhaps intangible phases of forest management will also have to be curtailed. The control of timber trespass would receive inadequate attention with some consequent loss in resource and revenues.

The collection and analysis of basic data as a prerequisite to management for perpetual timber yields would have to be postponed.

I think it is entirely evident that the reduction in appropriations that will necessarily be applied to the forest-management activity will, instead of saving money to the Treasury, lose it as well as cause the withholding of much needed timber from the market.

I have set before you facts and figures on how a reduction of $800,000 in the Bureau of Land Management budget will jeopardize the economy of the West, an economy, remember, that also affects the East. In a period of time in which meat, wool, and timber are needed for defense purposes, we cannot afford to cut the vital land management program.

This cut, made on the floor of the House, will put a monkey wrench in machinery that is helping produce the products that this Nation must have.

I ask you to restore the cut and insure continued efficient operation on our public lands.

SOUTHEASTERN POWER ADMINISTRATION

CONSTRUCTION

LETTERS FROM SENATOR ROBERTSON

Senator HAYDEN. With reference to the hearing held by the subcommittee on the Southeastern Power Administration, I will place in the record at this point a letter I have received from Senator Robertson of Virginia, together with letter and enclosure to him from Mr. T. Justin Moore, attorney for the Virginia Electric & Power Co.

(The material referred to is as follows:)

UNITED STATES SENATE,
COMMITTEE ON BANKING AND CURRENCY,
May 29, 1951.

Hon. CARL HAYDEN,
Chairman, Subcommittee on Interior,
Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: Knowing my interest in the power problem for Virginia farmers, you very kindly and graciously invited me to sit in with your subcommittee on May 22 when representatives of Southeastern Power Administration were scheduled to appear before you to discuss requested appropriations for transmission lines in Virginia and North Carolina.

The printed record of those hearings will disclose that I said:

"Mr. Chairman, I appreciate your invitation in inviting me to sit in with you today, because you know my great interest in seeing the maximum use of Buggs Island power for our rural section and other preferred customers under the REA public power laws.

"* * * Our concern is: We want the farmers to get the power and get it at a proper rate. We are trying to find out what the proper rate is. I gather from the testimony of the witness that he is going to haul Buggs Island power down to Kinston and sell it for 7.25 mills. But he doesn't yet explain to me how, when Buggs Island does not furnish enough power, he is going to firm it up and give them power all the year around at that rate. Where is he going to get the balance and what is he going to pay?

"* * * I think we are very close together about this thing. As I said, my chief aim is to see that our farmers get the power, and get it at a proper rate. I think we can reach that.

"* * * The important thing, Mr. Chairman, as I say, is to try and reach an agreement that is fair, fair to the private utilities and fair to the farmers, and under which the farmers can get the power which they need and which they are entitled to. I believe that we can reach some agreement on it. I certainly hope so."

Vital hearings on the Defense Production Act before the Banking and Currency Committee, as well as other previous commitments, prevented me from attending your hearings when representatives of Virginia and North Carolina REA's and of the private utilities serving those two States were heard. Likewise, I was not present when Mr. Harllee Branch, Jr., president of Georgia Power Co. made what apparently was a very pleasing presentation to your subcommittee on how generously his power company, which incidentally is about the same size as VEPCO, had treated the Georgia farmers.

Following that testimony you suggested to me at lunch that you did not understand why VEPCO could not offer to Virginia farmers as favorable a contract as that now enjoyed by Georgia farmers. Immediately, I incorporated that suggestion, together with several other suggestions in line with my statement that my primary objective was to see that Virginia farmers were adequately supplied with power at a proper rate, in a letter to Mr. T. Justin Moore, general counsel of VEPCO, who, as you recall, had appeared before your subcommittee but who unfortunately had lacked sufficient time to adequately present his case.

I am today in receipt of a letter dated May 26 from Mr. Moore, replying to my letter to him, in which he very fully discusses the suggestions contained in my letter to him of the 24th. Attached to that letter are two memorandums which analyze Mr. Eardley's suggested 7.25-mill-per-kilowatt-hour rate and the salient features of the Georgia Power Co. contract at Altoona and its proposal for a similar contract for Clark Hill and other Government projects.

Since the enclosed letter from the general counsel of VEPCO not only more fully explains its position than Mr. Moore was able to do in his oral testimony and likewise indicates the willingness of his company to enter into a contract similar to that now proposed by the Georgia Power Co., I would appreciate your kindness in including in your printed hearings this letter and the enclosed letter and exhibits from Mr. Moore.

I am extremely anxious to see negotiated a contract between Southeastern and VEPCO that will be fair to the Government, to the utility and to all prospective customers, but I am not encouraged to believe that Southeastern is going to agree

to a contract similar to the Georgia proposal. In the first place, the Georgia proposal has been pending for some months and has not been accepted. In the second place, South Carolina Electric & Gas Co. last February wrote the Southeastern Power Administrator that it would be very glad to accept a contract similar to the proposals made by Georgia Power Co. and three other associated companies serving Georgia, Alabama, and Mississippi. To that letter Administrator Creim replied on March 2 that the proposal in question "is entirely unacceptable to the Government and the companies submitting it have been so advised."

Since that time, however, I understand that Mr. Wickard, the REA Administrator, has approved a rate of 7½ mills for all of the co-ops in eastern North Carolina.

As I stated at your recent hearings, I am no expert in the utility field and would not undertake to tell a private utility the rate it should offer or a co-op the rate it should accept. I do feel, however, that the proposal made by Vepco and the counterproposal made by Southeastern have greatly narrowed the area of disagreement. It is my earnest hope that when the Southeastern Power Administrator analyzes the statements of Vepco in the letter I am enclosing herewith the area of disagreement may be still further narrowed, especially in view of the testimony of Mr. Creim before the House subcommittee that "we cannot afford to pay more than 1½ mills per kilowatt for that service (referring to transmission) and still be competitive," and Mr. Eardley's testimony before your subcommittee that Southeastern estimated its transmission costs through a Government line at 1.19 mills for transmission service; and in view of the further fact that the Interior Department has previously entered into a number of large contracts in Oklahoma, Colorado, and Montana for service comparable to that to be furnished by Vepco at rates exceeding 1 mill. I understand, for instance, that the Texas Power & Light Co. contract works out at approximately 1.7 mills, the Oklahoma Gas & Electric Co. at approximately 2 mills and the Public Service Co. of Colorado at approximately 2 mills. Those were three contracts referred to with approval by our committee in its report of last December.

With best wishes, I am

Sincerely yours,

A. WILLIS ROBERTSON.

HUNTON, WILLIAMS, ANDERSON, GAY & MOORE,
Richmond, Va., May 26, 1951.

Hon. A. WILLIS ROBERTSON,
Senate Office Building,
Washington, D. C.

DEAR WILLIS: Thank you for your letter of May 24 as to Southeastern Power and for the further discussion when I telephoned you yesterday. I appreciate your frankness as to the points upon which the committee is particularly interested and in response I wish to state to you this summary of how matters now stand.

You mention that Southeastern Power Administration and Virginia Electric & Power Co. are not too far apart. I think you have in mind that Virginia Electric & Power Co. offered to supply all the cooperatives' requirements at 7½ mills (with a fuel cost clause which can go up or down), whereas Southeastern told the committee that Southeastern could supply at 7¼ mills. There are two things wrong with Southeastern's figure. One is that the 7¼ mills is said to include investment cost, or the rental equivalent, for complete transmission over a $20,000,000 system at a unit-transmission cost of 1.19 mills. In fact, Government financing costs on such a system would, as demonstrated by Old Dominion Electric Cooperative's figures, come to 2 mills instead of 1.19. The other flaw in Southeastern's figure of 7¼ is that it is not Buggs Island power cost but the cost of Buggs Island power averaged down by cheaper steam power from VEPCO. The cost of power from Buggs Island by itself must run over 9 mills, as reported by the Army engineers and as is mathematically demonstrable from Southeastern's latest rate quotations of 90 cents per kilowatt, and 4½ mills per kilowatt-hour.

The fact is that 7¼ and 7½ is not a measure of the difference between Southeastern and VEPCO on the disputed wheeling charge, which, if Southeastern's transmission lines are not to be constructed, is the only important issue remaining to be solved to reach a wheeling agreement. As to that issue, VEPCO is offering to wheel at its transmission cost of 2 mills (although the delivery to cooperatives imposes on VEPCO additional cost in use of parts of VEPCO's distribution system), and Southeastern demands wheeling at 1 mill, which is half of VEPCO's transmission

cost. For the 11 Old Dominion Cooperatives, VEPCO's alternative offer to charge on a zone basis would come to an average charge of 1.75 mills. Both of the VEPCO offers are, of course, well below what would be the Government's own cost for similar area service, and less than what the Government has accepted for comparable service elsewhere in the Colorado, Montana, Oklahoma, and other contracts.

You mentioned Mr. Robert Whitehead's insistence to the committee that Vepco should wheel to the cooperatives for 1 mill on his claim that in the Old Dominion case Vepco argued for Vepco service on that basis as the alternative to the proposed Old Dominion system. On the evidence presented by Vepco and Old Dominion in that case, what the Commission held was that the proposed cooperative generating and transmission system would, over the 35-year period of the loan, cost the cooperatives $22,000,000 more than power supply from Vepco on its offer to supply all their requirements by direct sale at the rate of 7½ mills. Supply at that rate is available to the cooperatives and they will not take it. What Mr. Whitehead refers to is a Vepco wheeling offer made in 1949 which he insisted the Virginia Commission should not consider, and which, because Mr. Creim of Southeastern rejected it, the Commission did not consider but held "a dead duck." The offer was to wheel not for 1 mill but at a rate to be mutually agreed or fixed by the Federal Power Commission. Mr. Whitehead claims 1 mill because Vepco, in a cost analysis of the dead duck wheeling proposal, made an assumption of a 1-mill charge. We have met Mr. Whitehead's claim by the response that: (1) 1 mill was not offered; (2) the contract he refers to would sell Vepco's firming steam power to the cooperatives at 7½ mills rather than at the lower rate offered Southeastern; (3) since the cooperatives now demand 1 mill because of its use in the cost analysis assumptions, then with acceptance of all those assumptions they cah have the 1 mill rate. Whereas in this response to the cooperatives' demand that Vepco lie up to its assumptions, Vepco has thus offered to do so, the cooperatives' reply by letter of May 22, has now attacked that part of the assumptions which they dislike. They cannot claim the 1 mill on what they say was a proposition when they will not take the proposition. Nevertheless the cooperatives have requested a conference on May 28 on the thus revitalized dead duck. We readily agreed to the proposed conference, and will do all we can to reach a happy solution.

Frankly, however, I cannot be optimistic over this resumption of negotiations with the cooperatives because the root of the whole problem as to the wheeling rate in Virginia is the relatively high cost of Buggs Island power at over 9 mills, and its consequent inability to compete with the 7½-mill power available from Vepco to the cooperatives. Buggs Island power cannot compete with that rate without using Vepco's transmission for half of Vepco's transmission cost and without taking from Vepco low-price off-peak steam power. By persistent demand both for 1-mill wheeling and favorable provision of steam power, Mr. Whitehead and Mr. Creim have been insistently pursuing a course to compel Vepco to subsidize Buggs Island simply to tie cooperatives to Government power. The Government cannot achieve this on its own costs. We do not believe that Vepco consumers—including far more farmers than the farmers served by the cooperatives—should be compelled by threat of destructive Government competition to grant such a subsidy to enable the Government to take over the cooperative as Government customers.

In your letter you mention that importance may be attached by the committee to construction of at least stub lines from Buggs Island. In my testimony before the committee, on a question from the chairman whether Vepco was opposed to short lines I replied that we were. I had in mind lines out into the area. Vepco had already informed Southeastern that it was willing to wheel from the end of short lines of not over 2 miles to be constructed by Southeastern, as confirmed in Vepco's letter of April 6 to Southeastern. Our only objections to stub lines are that (1) if built they should provide interconnection with Vepco at a single point to avoid the unjustified cost of more than one switching station, which is an expensive facility; and (2) they are totally unnecessary as our 110-kilovolt transmission lines already extend to the Buggs Island dam site, where they have been for over 20 years.

Your letter states that such stub lines may be necessary to maintain a principle that no private utility has so far been permitted a direct connection with the bus bar of a Federal dam. The impression that such a principle has been in fact observed may have been created by Interior Department spokesmen before the committee but the fact is to the contrary. Let me be quite explicit about this and quote you from some of the contracts we have read on this point. Also, I

would like to point out that there is nothing exclusive about delivery at the power station switchyard. If Vepco's system should connect to the Buggs Island power station switchyard, that does not prevent any other connection.

The Idaho Power Co.'s contract of December 15, 1950, with the Bureau of Reclamation for purchase and wheeling from the Minidoka Dam on the Snake River in Idaho thus describes one of the points of connection: "* * * at the point at which the company's 138,000-volt circuit connects with the Federal substation at the Minidoka power plant;"

The Southwestern Gas & Electric Co.'s contract of December 27, 1950, with Southwestern Power Administration for purchase and wheeling from the Narrows Dam on the Little Missouri River in Arkansas thus describes the point of connection: "* * * The point of delivery of the electric power and energy delivered by the Government into the company's system hereunder shall be the point where the company's 69,000-volt line conductors make electrical connection with the 69,000-volt bus in the substation located at the Narrows Dam."

The Georgia Power Co.'s contract of August 3, 1948, with the Department of the Interior for purchase by the company of the entire output of the project thus describes the point of connection: "* * * The Government will operate the Allatoona power plant as scheduled by the company and deliver the entire output thereof * * * to the company on its 115-kv line in the Allatoona station switchyard."

For the Philpott Dam on the Roanoke River, scheduled to begin operation before Buggs Island, Southeastern Power Administration requests no appropriations for either "load center" lines or stub lines, but only $4,000 for connection facilities at the dam to tie to the system of Appalachian Electric Power Co. Of the propriety of such a connection Southeastern itself has this to say in the budget justification (sec. 33):

"I–16, Philpott-Appalachian Power Co. interconnection, fiscal year 1952.. $4,000

"This feature will provide an interconnection with the company which will provide maximum benefits of integrated operation. It will provide a delivery point to the company's system of wheeling to the Government's preference customers provided a satisfactory agreement can be negotiated with the company. Negotiations are under way at the present time and progress is being made toward working out a detailed agreement within the principles of the Flood Control Act of 1944 and the Federal power policy.

"The fiscal year 1952 program includes funds necessary for installation of metering equipment. Energization of this feature is scheduled for September 1952."

With conclusion of a wheeling aggreement with Vepco, power station switchyard delivery at Buggs Island would stand on the same basis thus approved by the Department.

I understand that the committee is impressed that progress toward solution of the distribution of Government hydro power in the Southeast might be made if the other companies were willing to work out an arrangement similar to that proposed by Georgia Power Co. as described to the committee in the testimony of Mr. Harlee Branch.

In discussing the Georgia proposals with you yesterday, I described them with particular reference to the present contract for the Allatoona project. Actually, these proposals are not limited to the present Allatoona contract, but I understand Mr. Branch stated that he was willing to extend them to cover not only the Clark Hill project, but any other Government hydro project in the area, including Allatoona. The present Allatoona contract is merely one of sale at the project of the entire project output to Georgia Power Co., with the right of the Government to withdraw any portion of the power for sale to preferred customers, and transmission by the company is not covered.

In view of the interest taken by the committee in the Georgia proposals, we wish to assure you that our company would be entirely agreeable to undertake to work out an arrangement with Southeastern Power Administration upon the same principles as we understand them to have been described by Mr. Branch in his testimony. Our understanding is that the Georgia Co. would purchase the entire portion of the project output allocated to preferred customers in the company's area and would provide in the agreement agreed terms of resale to such customers. The company on those terms would deliver power equal to that taken on its system under the allocation, less losses, and would resell at the Government cost, plus compensation for what Mr. Branch described as handling

charges of about half a mill. The capacity and energy from the project allocated to the Georgia area would be integrated into the company's system and the plant would be operated so as to achieve maximum overall economy. There is no sale of firming energy by the company to the Government or for the Government's account. All further power requirements of the preferred customers would be supplied through sale by the company to the preference customers at a rate equal to the average rate the customer would have paid if the customer had purchased its entire requirements on the company's regular, applicable rate schedule. The customer would remain the customer of the company and Government power would be delivered only to such preferred customers as designated by Southeastern and to the extent determined by Southeastern. I can confirm to you my verbal assurance of yesterday that Virginia Electric & Power Co. would be entirely willing to arrange an agreement with Southeastern Power Administration on these principles.

Indeed, as long ago as September 1949, Vepco expressed its interest in working out a solution to the disposal of Buggs Island power by an arrangement quite similar in principle to this Georgia proposal. In October 1949, Vepco offered a definitive contract to the cooperatives for this purpose. That is the dead duck, mentioned above, which in some form Mr. Whitehead is now interested in revitalizing. It died when Mr. Creim of Southeastern flatly refused to work out anything on that basis. Under that proposal the cooperatives would remain Vepco's customers and would pay the wheeling charge rather than Southeastern taking over and buying the power and paying the charge. In that proposal the wheeling charge was simply to compensate the company for the use of its transmission system and for transmission losses and was to be fixed either by mutual agreement or by the Federal Power Commission. Mr. Creim refused to negotiate on these terms.

The only reason that Vepco now has before Southeastern the kind of proposal found in Vepco's offer to Southeastern as negotiated to date is that Mr. Creim insisted that he would consider no other.

As to the economies of Vepco's proposal and Georgia's, I believe that certain features of Vepco's are distinctly more favorable to Government and the preferred customers than is Georgia's even with Vepco's less favorable wheeling rate of 2 mills, which is Vepco's transmission cost. I believe that Vepco's proposed rates to Southeastern for sale to Southeastern and delivery to Southeastern's customers of Vepco's firming steam energy are definitely more favorable than the price which Georgia Power will charge the preference customers for its firming power. The proposed Georgia contract does not give the figures for the rates to be charged for power from its plants. It places the rate on a basis to be computed from the applicable rate for direct sale by the company to such customers. The only figure referred to by Mr. Branch in his testimony was an average rate to cooperatives of 6.75 mills. Vepco's proposal to Southeastern is to sell it firming energy at Vepco's steam plants at its average production cost plus 1 mill on-peak, and off-peak at its average fuel cost, and to deliver to the customer at the 2 mill wheeling rate. On Vepco's estimates of average costs for 1953, these charges would be: On-peak—average production cost of 4.34, plus 1 mill, plus 2 mills for wheeling, total 7.34; off-peak—average fuel cost of 3.45, plus 2 mills for wheeling, total 5.45. The Georgia principle of charging for firming energy at the applicable rate to the customer would increase these delivered prices to Vepco's 7.5 mills filed rate for cooperatives, for either on-peak or off-peak. Further, the 2-mill wheeling component would average only 1.75 to the cooperatives if its zone offer were accepted, and on that basis Vepco's engineers estimate that its collection for wheeling and firming would be approximately the same as it would be if it served the cooperatives under the Georgia contract with a handling fee of half a mill.

In short, in dollars and cents, it is our understanding that we would charge more for transmission and less for firming power and that Georgia Power Co. would charge less for transmission and more for firming power. As long as the total arrangement gives us merely a fair compensation for the entire service, we are willing to do it either way. What we have in fact proposed in our present 2-mill offer to Southeastern is to transmit at less than our cost for our service and to supply all necessary firming power at rates geared to our average cost. Whatever should be the best basis of doing the job, there is certainly no need or justification for Government transmission investment.

Very truly yours,

T. JUSTIN MOORE.

COMMENTS ON MR. EARDLEY'S SUGGESTED 7.25 MILL PER KILOWATT-HOUR RATE

On May 23, 1951, Mr. Eardley stated to the Senate Subcommittee on Appropriations that:

(1) The basic rate for Buggs Island power at the dam would be 90 cents per kilowatt per month plus 4½ mills per kilowatt-hour.

(2) The rate per kilowatt-hour proposed for power delivered to preferred customers is to be 7.25 mills.

(3) SEPA could build a transmission system adequate to distribute Buggs Island power for $20,000,000.

The record in the case shows that:

(1) Buggs Island is to be developed at 204,000 kilowatts.

(2) In an average year 410,000,000 kilowatt-hours will be generated at the project.

In the light of this information the following resulting facts are of interest:

(1) Buggs Island power, on Mr. Eardley's rate, will cost 9.87 mills per kilowatt-hour.

(2) Customers using electricity at a 46 percent load factor (this is not a high load factor) must have 820,000,000 kilowatt-hours rather than the 410,000,000 kilowatt-hours Buggs Island can generate.

(3) SEPA, therefore, must buy 410,000,000 kilowatt-hours of steam-generated energy.

(4) To sell 820,000,000 kilowatt-hours at 7.25 mills, SEPA must purchase 410,000,000 kilowatt-hours at a price enough below 7.25 mills to bring the 9.87 mill Buggs Island price down to 7.25 mills. The purchase price must, therefore, be 4.63 mills exclusive of any fee for wheeling the power from generating stations to SEPA lines.

(5) Annual costs of $20,000,000 of transmission investment will be $1,676,000 (5.95 percent on investment based on Federal Power Commission figures for Federal transmission systems, plus $486,000 for administration, maintenance, and operation of lines and substations, based on testimony of Old Dominion Electric Cooperative before the Virginia State Corporation Commission).

(6) $1,676,000 divided over 820,000,000 kilowatt-hours equals 2.04 mills per kilowatt-hour.

(7) This charge cuts the price SEPA could pay for steam-generated kilowatt-hours down to 2.59 mills per kilowatt-hour.

(8) Any charge made for bringing steam-generated power from steam plants to SEPA's system would cut the price SEPA could pay still more and to the extent of the total amount of such charge.

(9) VEPCO's fuel cost for the 4 months ending April 1951 was 4.1 mills per kilowatt-hour and its production cost was 5.3 mills per kilowatt-hour.

(10) Its estimated fuel cost for 1953, based on continuance of present coal prices, is 3.45 mills and the production cost for that year is estimated at 4.34 mills.

(11) SEPA must, therefore, purchase its steam-generated power at 1.51 mills below VEPCO's present fuel cost and 2.71 mills below VEPCO's present production cost, in order to make the proposed rate of 7.25 mills per kilowatt-hour possible.

(12) Likewise, it must purchase its steam-generated power at .86 mills below VEPCO's estimated 1953 fuel cost and 1.75 mills below VEPCO's estimated 1953 production cost to make its 7.25 mill rate possible.

A LIST OF THE SALIENT FEATURES OF THE FOLLOWING CONTRACT AND PROPOSALS

ALLATOONA-GEORGIA POWER CO. CONTRACT

(1) The entire output of the Government's Allatoona Dam is sold by Government to Georgia Power Co. in Government's plant switchyard at the plant site.

(2) Georgia Power Co. has full control of the plant output just as if Allatoona were one of its own generating plants.

(3) Georgia Power Co. does not transmit any energy from the plant to preferred customers for account of Government.

(4) Georgia Power Co. does not supply steam energy to Government for firming up Allatoona hydro output.

(5) Government may, whenever it desires to do so, withdraw any or all the power supplied Georgia Power Co. under this contract, but no provision is made for firming up with steam the power so withdrawn.

GEORGIA POWER CO. PROPOSAL FOR HAULING POWER FROM CLARK HILL AND OTHER GOVERNMENT PROJECTS

This proposal embodies the following features:

(1) Georgia Power Co. would take all Government generated power allocated to its territory into its transmission system at the Government switchyards located at each plant site. This arrangement would cover the Clark Hill project, the Allatoona project, and any future Government projects as such projects are constructed in the entire area of the southern companies.

(2) Georgia Power Co. would deliver to any preferred customer its pro rata share of Government power allocated to the Georgia area from its project or projects and receive therefor compensation at — percent (extimated by the president of Georgia Power Co. as about one-half mill) from Government as a handling charge.

(3) Georgia Power Co. would supply the remainder of the preferred customer's power requirements at the average rate which that customer would have earned had customer secured its entire power supply from Georgia Power Co.

(4) Georgia Power Co. would not supply steam generated firming energy for Government's account. Instead, it firms for customer's account at its average filed rates.

(5) No preferred customer would be a customer of Government. Instead, all preferred customers would continue to be customers of Georgia Power Co.

VEPCO PROPOSAL TO SEPA

(1) Vepco would take Buggs Island power allocated to Vepco territory into its existing transmission lines (which are closely adjacent to the plant) at or near the plant site and would agree to construct such additional lines to the site as the final development at Buggs Island might make necessary.

(2) Vepco would turn over to Government as Government's customer, any preferred customer, in its service area, who desired to purchase power from Government.

(3) Vepco would wheel Government power from Buggs Island to any such preferred customer, in its service area, in the amount allocated to that customer by Government, plus the energy from Vepco's steam stations necessary to make up the entire amount required by the customer, for a flat wheeling fee of 2 mills per kilowatt-hour; for a zone rate which is lower than any zone rate included in any similar contract, of which we have knowledge; or at its transmission cost. It has offered to have this cost determined by the Federal Power Commission or by a board of three arbitrators, one selected by Vepco, one selected by SEPA and the third to be the Chief of the Power Bureau of Federal Power Commission.

(4) Vepco would supply from its steam stations any and all power requirements of any preferred customer which were in excess of the amount allocated to that customer from the Government project.

(5) Vepco would bill Government for such firming energy supplied to the preferred customer at the rate of its production cost, plus 1 mill during on-peak hours and at its average fuel cost during off-peak hours.

SOUTHWESTERN POWER ADMINISTRATION

STATEMENT OF HON. THOMAS C. HENNINGS, JR., A UNITED STATES SENATOR FROM THE STATE OF MISSOURI

RESTORATION OF BUDGET ESTIMATE REQUESTED

Senator HAYDEN. Senator Hennings, who was present during earlier hearings on the Southwestern Power Administration, has handed to me a further statement in behalf of appropriations for the Southwestern Power Administration, with the request that his statement be placed in the record.

Senator Hennings' further statement will be inserted in the record at this point.

(The statement referred to is as follows:)

STATEMENT BY UNITED STATES SENATOR THOMAS C. HENNINGS, JR.

Mr. Chairman, several days ago it was my privilege to sit in with the members of the subcommittee on the Interior Department appropriation bill and to listen to the testimony presented by several of my friends from Missouri and representatives from other States on the appropriation for the Southwestern Power Administration.

As I stated to the committee at that time, I was very glad to be there that afternoon, for although I have been interested in this project over a long time and have worked with representatives of the REA on their needs in that area, it afforded me an opportunity to learn more of the details on the whole power situation in southwest Missouri.

REA has long been a matter of special interest to me. It was my privilege, while serving in the House of Representatives, to vote for the first REA authorizing legislation and I voted at that time because of my realization of what it might mean to the rural population of Missouri. Since that time, I have seen at firsthand the gratifying fruition of tangible results under the REA program in terms of vastly increased productivity of our great Missouri farm lands and the lifting from the backs of our farm men and women of what was often a burden of hopeless drudgery.

The House Committee on Appropriations recommended $3,925,000 in construction funds for the Southwestern Power Administration. Subsequently, the House approved two amendments which I believe are disastrous to the people of my State.

The first of these is the so-called Harris amendment, which reduces construction funds by $500,000, and the second is the Short amendment, which prevents the use of the funds appropriated for developing the western Missouri project.

In the first place, Mr. Chairman, while I certainly believe in economy, this simply does not make sense as an economy measure. The SPA is no drain upon the taxpayers or on the Federal Treasury. The Government is engaged in marketing power at the lowest possible rates consistent with sound business principles. In the case of SPA, for every dollar appropriated by the Congress for the generation and transmission of electric power, $1.76 is returned. It seems to me that this is a good investment. Moreover, the increased productivity of the users of this power results in greater returns to our Treasury in the form of taxes.

The Harris amendment is not economical because it means that existing lines cannot be utilized to their fullest capacity through the construction of the contemplated short extensions to provide service to nearby communities.

The Short amendment is not economical because it would leave the SPA with partially completed facilities and would mean that the amounts we have appropriated earlier would be wasted through our failure to carry through an integrated power program.

I do not believe that the Government should undertake services which can best be performed by private enterprise. In this case, however, private utilities have been either unable or unwilling to supply power at reasonable rates. Since this is so, we certainly have a responsibility to the farmers and their families and to the many small communities and towns and rural businesses to see that the labor-saving benefits of electricity are made available to them at prices which they can afford.

Mr. Chairman, our farmers are supplying the necessary food for our domestic use, for our Armed Forces, and for a large portion of the free world. The splendid record of production which they have achieved has been made possible to a large extent through the provision of electric power and the elimination thereby of some of the back-breaking labor.

I do not intend to go into any of the more technical aspects of SPA, since the facts are well known to this committee and have been so ably presented by witnesses before the committee. I earnestly urge, however, the restoration of the $500,000 in construction funds and the elimination of the crippling amendment prohibiting completion of the western Missouri project.

Senator HAYDEN. The committee will recess until 2 p. m. tomorrow.

(Thereupon, at 5 p. m. Thursday, May 31, 1951, the hearing recessed, to reconvene at 2 p. m., Friday, June 1, 1951.)